NEW-YORK MEDICAL AND PHYSICAL JOURNAL.

JULY, AUGUST, AND SEPTEMBER, 1828.

ART. I. *An Essay on Neuralgia.* By JOHN GORRIE, M.D. of Abbeville, South Carolina.

THE course of nature in continuing the human family subject to the same diseases from the most remote period to the present time, has preserved a remarkable uniformity. There are, however, deviations from the direct line of her march; and among these, there is reason to believe, that the terrible disease which is the subject of this essay, is, from its comparatively modern origin, conspicuous. No description of it appears in the writings of the Greek physicians, and it is not probable that a complaint marked, as this is, by a prominent characteristic, would have been allowed by those accurate and minute observers of disease, to have passed unnoticed if it had existed. Nor is it till we descend in the history of medicine in the latter part of the seventeenth century, that we discover any mark of its influence over mankind; and then it is so obscurely traced, as to be with difficulty recognised. But in the following century, several good accounts of the disease were given to the world; of which one by André, of Versailles, published in 1756, may be considered the first accurate description of its distinguishing features.

For a considerable time after the publication of this surgeon, the notices of the disease continued few and at distant

intervals; but of late years cases have been brought before the public in greater numbers annually, proving that the complaint is remarkably on the increase.

In connexion with the history of the complaint, it ought to be mentioned that until within a few years, it was thought to be confined exclusively to the nerves of the face; but its repeated occurrence in various other parts, has proved its more general diffusion, and rendered it probable that all the nerves are subject to it—"cerebral, spinal, or ganglionic."

The local habitation assigned to the complaint required a corresponding appellation; and, hence, Dr. Fothergill, who was the first to publish a history and description of it in the English language, called it "Faciei Morbus Nervorum Crucians." A variety of other names, as tic douloureux, hemicrania idiopathica, trismus dolorificus, autalgia dolorosa, have been given to it; but that employed by Dr. Fothergill, was continued by most English writers until the liability of all the nerves of the human frame was discovered, and a generic term for the disease became necessary. To Professor Chaussier we are indebted for the term Neuralgia, which supplied the deficiency so well, and was considered so expressive of the nature of the affection, as to be generally adopted.

Causes. On the important subject of the remote causes of this dreadful disease, we are not able to say much with certainty. This is a subject of regret, as it prevents any account of it from being complete, and is more to be deplored from the consideration, that it is believed much of the difficulty in curing the complaint would be removed, could we have correct views of its etiology. A number of derangements of the body, both local and constitutional, have been found to precede and accompany neuralgia, and these have been considered, and from their removal eradicating the disease, no doubt are, exciting causes.

The following have been mentioned as local causes of the complaint. Irritation has sometimes produced it, as from an ulcer connected with a branch of a nerve, an anastomosis between the affected nerve and that of a decayed tooth, or from

a carious bone. Injuries from blows, falls, pressure on nerves during parturition, seem to have produced complaints very much like it, if not actually neuralgia. A violent cold appears to be not an uncommon cause. Debilitating discharges in the weak and delicate, as hæmorrhage or diarrhœa, are said to be causes of painful affections of the nerves.

The constitutional causes are considered more numerous and of much more frequent occurrence. Of these two have been supposed to be discovered which are not removable: in one, Dr. Pemberton's case, it was thought to be an irritation of the brain produced by a bony excrescence; in the other, it was considered an organic disease of the base of that organ.

But the most general cause is now considered to be a depraved state of the system. This depravity, the opinions of authors and the effects of remedies, proves to be of various kinds. Dr. Fothergill thought he traced it to a cancerous habit of body; in some instances it has been supposed to arise from a syphilitic taint; in others it has been considered dependent on a rheumatic diathesis; and several authors refer it to an arthritic state of the system. Dr. Armstrong attributes it to a venous congestion, or an increased action in the arteries of the brain. The editor of the Medico-Chirurgical Review thinks it commonly the case, that it arises as a consequence of debility or derangement of function of some internal organ, as of "the stomach or intestines, at a great distance from the seat of the actual pain."

Although neuralgia has been considered symptomatic of so many complaints, it seems not to be denied that it is idiopathic also.

Character. The only constant symptom of neuralgia is pain, which is of a peculiar lancinating kind, and corresponds in its course with that of the nerves affected. This pain, although varying in degree in different constitutions, exceeds that of every other disease, "exciting the most exquisite anguish which human nature can possibly suffer without destroying life." It varies considerably in the different stages of the complaint; in the incipient, the attacks are so brief and slight as to be almost imperceptible; but in the advanced

stage they are lengthened, are more sudden and violent in their occurrence, and quicker in their succession. The continuance of the pain seldom exceeds a minute, when it often remits as suddenly as it came on, leaving no other sensation than a dread of its return, or a slight tenderness and soreness of the part affected. The intermissions are of uncertain duration, seldom exceeding, though often extending to fifteen minutes; they, however, are liable to continual interruptions from numerous exciting causes; thus, a draught of cool air, the action of the muscles of the part affected, or mental agitation, will produce a paroxysm. An accompaniment of the pain, not universally present, but so generally that it might be considered a characteristic of the complaint, is a spasmodic twitching of the muscles of the diseased part. And a singularity of the affection is, that while a slight touch of the diseased part, as alluded to above, will bring on a paroxysm, it may be roughly pressed, or rubbed without inconvenience, and during a paroxysm with relief. It is, perhaps, a consolation to the sufferers by this disease, that, notwithstanding the dreadful severity of the pain, it has rarely produced death; and it seems, in general, to exert little influence in subverting the foundations of life.

Although every part of the system is liable to neuralgia, yet the severest and most common form of it is seated in the face. In this situation, the pain, though sometimes extending to the greater part of the head, is generally confined to one side only, and frequently to but a part of that, as one eye, the upper lip and nose, or the gums.* The actual seats of the complaint are most frequently the portio dura of the seventh, and the superior maxillary of the fifth pair of nerves; though the instances of its attacking the superior orbitary, and inferior maxillary branches of the latter nerve are numerous. But it has been observed, that in whatever nerve the disease may originate, if it continues, it will spread until every nerve of the face is affected.

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* Medico-Chirurgical Review.

There is nothing peculiar in the disease situated in other parts of the body, excepting what may arise from the length of the nerve affected. The racking and lancinating pains appear, as in the face, to shoot along the branches of the diseased nerves towards their trunks; and sometimes extend from the extremity of a limb through its whole course, and even into the neck or loins.

Age &c. most liable. Neuralgia has been found in nearly all ages; in both sexes; in the robust and in the delicate. But it most commonly arises in advanced life, seldom attacking under the age of thirty; women appear to be considerably more subject to it than men; and persons of a delicate irritable habit and nervous temperament, are much the most frequently afflicted.

Diagnosis. Neuralgia, when seated in the face, has been occasionally mistaken for hemicrania, tooth-ache, and abscess of the antrum; and in any part may be mistaken for rheumatism, neuritis, and periostitis. From these complaints it is not difficult to make a distinction, when an accurate inquiry is made into the origin, progress, and present symptoms of the disorder. Hemicrania is known by the pain being general over the head; where as in neuralgia it accurately follows the ramifications of the affected nerve. Tooth-ache may be distinguished by the depth and pungency of the pain; its permanence and confinement to one spot; its absence from convulsive twitchings. The pain extending into the nose, the pressure on the eye and tumour of the cheek are sufficiently distinguishing characteristics of abscess of the antrum. Rheumatism may be readily distinguished by its fever, reddess, heat, and local swelling.

The affection for which it seems most likely to be mistaken is inflammation of the nerves. M. Martinet, of Paris, is the discoverer of the difference between this complaint and neuralgia. Neuritis, he says, he always found seated in the neurilema, or membrane investing the pulp of the nervous fibrils, and never in the nervous pulp itself. The symptoms accompanying the complaint, he states, consist in more or less complete diminution of function in the affected nerve;

in pain of a benumbing as well as lancinating kind, *never suddenly intermittent*, but generally continued with occasional exacerbations and remissions.

The diagnostic differences between periostitis and neuralgia, I am not prepared to designate with precision. In the former, however, the pain is deeper seated, more constant, with more or less heat present, and frequently a sense of pulsation; it is increased by pressure, and in proportion to its violence; the patient complains of a sense of tumor, which his feelings magnify much beyond its real size; and it terminates, after a longer or shorter time, in resolution, abscess, or gangrene.

Terminations.—The complaint has been said to terminate, in several instances, in a fatal coma. Sometimes it terminates spontaneously, but a long and tedious period is requisite, it having been known to last upwards of twenty years. This termination is effected by the nerve and its ramifications becoming gradually torpified, by the excess of irritation of the disease.* Mr. Swan relates a case where the pains instantly ceased and returned no more, on the supervention of an eruption resembling the nettle rash, which came all over the patient's body; and there are several other instances on record, of the occurrence of other diseases removing neuralgia.

In the Medico-Chirurgical Review† there is an account of a case of neuralgia, which I repeat for its singularity. The affection commenced in the arm, from which there was a metastasis to the chest and stomach, producing in the former a sensation of tightness and stuffing, and in the latter a violent cardialgia, with vomiting of every thing taken. The affection of the chest and stomach continued six months, and then ceased entirely, but a copious diarrhœa took their place, and continued for two months. "The neuralgia of the digestive organs now shifted to the uterine system, producing violent pain in the hypogastric region, and suppression of the

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* Good's Study of Medicine, Vol. III. p. 196.

† Vol. II. p. 427.

menses." The patient was now relieved by the application of the moxa to the affected arm.

Proximate Cause.—The variety of theories on this subject exhibit a greater diversity of opinion than is found on any other disputed point of the disease. In the eagerness of authors to fix on something definite, each of the constitutional exciting causes of the complaint has been considered its proximate cause. With regard to these it is only necessary to observe, that as no one of them has been found present in every case, no one can be the proximate cause. Passing over some others that have been assigned, I shall consider two theories that appear to have a pretty general prevalence—those of Dr. Parry and Mr. Swan. The former expressed the opinion that the proximate cause consisted in "an increased vascularity or determination of blood (perhaps amounting to inflammation) to the neurilema of the nerves affected." That this opinion is not correct, the symptoms of the disease during life would seem to indicate; and Mr. Swan expressly declared that in dissections of subjects who had been affected with neuralgia, there was no alteration in organization, nor any of the effects which are known to follow an inflamed nerve. The same conclusion is to be drawn from Mr. Martinet's observations. On the other hand, the editor of the Medico-Chirurgical Review says, there is, generally, an increase of heat and vascularity in the part affected; but this, he also states, is found more especially in "the progress of the complaint;" and he seems to consider them as the effects of the nervous irritation. These evidences are sufficient for us to draw the conclusion that the proximate cause does not depend upon a congestive or inflammatory state of the neurilema of the diseased nerve.

The hypothesis of Mr. Swan supposes, that where the disease arises spontaneously, or in some cases, where a slight wound has been inflicted, the complaint is only symptomatic of a general irritability of the brain and nervous system. To this theory it must also be objected that it is not applicable to all cases; for it not unfrequently happens, that the disease arises in individuals enjoying, in every other respect, sound

health; and besides, the author's idea of it gives it a limited operation, which is adverse to the nature of a proximate cause.

Considering these several hypotheses untenable, the question recurs, what is the proximate cause? Difficult as the answer must be from the obscurity of the operations of the nervous system, I conceive, from a view of the character of the complaint, that we are left to seek it in the sentient part of the nerve itself; and it probably consists in an increased irritability and morbid sensibility of its medulla.

Treatment. The obstinacy of neuralgia in resisting remedies, frequently equals its severity, often defying the united skill of the most experienced physicians and surgeons. And this from the want of remedies operating directly on the affected nerves, will, it is probable, continue frequently the case; though some part of the failure which has hitherto attended its treatment, may be attributed to a neglect of ascertaining its causes, or a want of correct views of them. It appears to have been too generally considered that the affection is exclusively idiopathic, or arises from an uniform cause, and hence, that a remedy which has proved successful in one instance ought to be equally so in another. Particular views of the proximate cause have led to uniform and unsuccessful plans of treatment. That it is not dependent upon a single cause, is sufficiently apparent from the preceding account of them; and the only way, in most instances, of operating upon the proximate cause, is by the removal of the remote. As these remote causes have been found of various kinds, it is evident that they require a diversity of treatment; the remedy which would be proper for the disease arising from one cause would, it is probable, be pernicious where it arose from another. These considerations seem to demonstrate, that in commencing the cure of this complaint, our first object should be to ascertain its etiology.

A variety of remedies have been employed in the treatment of this terrible disease; but accessions to the number have been made as often experimentally, as from pathological considerations. In the following pages I shall endeavour, as far

as it is practicable, to connect the causes of the disease with a brief view of its appropriate remedies. These remedies may be divided into two great classes. Topical and Constitutional.

Topical applications.—The use of this class of remedies has been very much limited, since the discovery that neuralgia has a constitutional, as well as a local origin. This change of opinion, we have reason to believe, has caused them to be improperly neglected. As remedies where the complaint arises from a local cause, they are unquestionably indicated. Again, when the disease evidently originates from a constitutional disorder, and general remedies do not act with sufficient force to enable the system to overcome the nervous affection, topical applications will be found valuable auxiliaries.*

Cauteries.—André, according to Dr. Good,† succeeded in removing neuralgia permanently, by applying a caustic to the infra-orbitary nerve, in one case in which a previous division of the nerve by the scalpel produced only a temporary cure. Neuralgia has been cured by the application of the moxa. "Baron Larrey has had much success with this measure. He applies it repeatedly; burning the part affected ten, twelve, or more times, and following the pain wherever it takes up its domicile." Another French surgeon, M. Delpech, destroys the diseased nerve by the actual cautery, and when the eschar separates, he does not permit the wound to heal, but keeps up a long continued suppuration.‡

Removal of irritants.—As the disease sometimes arises from a carious bone or tooth, it is important that it should be discovered and removed; cases which had resisted all other

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* In illustration of this opinion, I could detail two cases where the neuralgic affections continued after the constitutional diseases appeared to be removed, and where the patients were cured, in a few days, by making caustic issues over the course of the affected nerves.

† Study of Medicine, Vol. III. p. 195.

‡ Medico-Chirurgical Review.

modes of treatment, have been finally cured by removing such an irritation.

Belladonna.—Several cases of neuralgia have been relieved almost instantly, by the application of a strong watery solution of belladonna to the skin over the affected nerve, after a variety of other applications had been resisted. The solution may be made of sufficient strength, by dissolving two drams of the extract in an ounce of water.

Cerussa.—According to Mr. Beddingfield, Sir Astley Cooper cured a case of neuralgia by paralysing the nerves with cerussa. Two scruples were formed into an ointment, and rubbed on the affected cheek about an hour before the paroxysm was expected. The effect of the lead is reported to have been rapid and striking; the person being rendered comparatively comfortable in a short time from a state of excruciating torment. The carbonate of lead united with opium, and formed into an ointment, is a popular remedy in the French hospitals for this complaint.

Acupuncturation.—This singular remedy has risen into considerable reputation, as a means of curing local pains of a nervous character. M. Berlioz of Paris, Dr. Haime of Tours, and Mr. Churchill of England, seem to have removed diseases of a neuralgic nature, by a few minutes' application of the needle. M. Pellatan says, he has repeatedly seen neuralgia completely cured by one, two, or three applications of acupuncture; and thinks himself authorised to aver that it is a remedy without inconvenience, and almost without pain, which nearly always cures neuralgic pains. In the practice of M. Bally, the application of the needle in some cases of neuralgia, completely cured them; in others it totally failed of ever giving relief. Similar results attended its use in the hands of Dr. Bache of Philadelphia. The writer has been informed, by a respectable physician, of two cases in which the needle had been applied, in one of which it effected a complete cure, and in the other produced great relief. Upon the whole, the mass of evidence is in favour of its efficacy; and as most writers agree that its application is attended with little pain, it is a remedy certainly deserving of a trial.

The scalpel.—While neuralgia was considered an entirely local disease, the division of the affected nerve was thought to be the only artificial cure. Even since it has been ascertained to be also a general disorder, "from the utter inefficacy of other local and constitutional treatment it has been resorted to;" and perhaps, has attained as much success as most other remedies. This success would probably be greater, if prejudice did not oppose its use till the disease has extended from its primary seat to the neighbouring nerves. It must, however, be acknowledged that there are great objections to the use of the scalpel; numerous instances are on record, where the operation has totally failed in every stage of the complaint; while in others, where it has produced relief, the affection has recurred on the reunion of the divided nerve. Another objection to its employment, at least on the face, is the greater or less deformity it produces on the operated person; and this objection extends to a much better instrument, Sir A. Cooper's curved bistoury.

Constitutional Remedies.—It seems to be the opinion of most late writers on neuralgia, that it is exclusively a constitutional complaint. The views I have taken of the nature of the disease, lead me to conclude that it may exist as a strictly local affection; still I agree with those authors who represent it as originating, in the greater number of cases, from a constitutional cause. At the same time, I consider the disorder of the system as, sometimes, an accidental accompaniment, arising from the patient being most susceptible to the attacks of both diseases at a common period of life; and it is not improbable that it may, occasionally, be an effect of the local irritation. But whether the constitutional complaint is a cause, accompaniment, or effect of the neuralgia, may generally be ascertained by attention to the period of its occurrence; and perhaps it is not a material point which it is, for it does not exist long without exerting an influence over the nervous affections, and then it becomes important for the cure of the latter, that the constitutional disorder should be removed.

Those writers on this disease who have assigned to it a con-

stitutional cause, have each employed in the treatment the medicines which accorded best with his pathological views of its origin. These, and others which have been found serviceable in neuralgia I shall distribute into four classes—Alteratives, Anti-rheumatics, Narcotics, and Tonics: each, however, must be considered as requiring the auxiliary means of blood-letting or emetics and purgatives, and an attention to diet and exercise.

Blood-letting.—This remedy was recommended by Doctor Armstrong, on the supposition that neuralgia was a complaint of the brain; and by others, on the idea that it consisted in an inflammation of the neurilema of the affected nerve. In cases where the disease is preceded and attended by the symptoms, Dr. Armstrong always found, "such as pain, giddiness, confusion, or some other uneasiness of the head," &c. bleeding ought not to be omitted. Where, also, the complaint occurs in a full plethoric habit, and is not of long existence, it will be an useful remedy.

Emetics and Purgatives.—In whatever diseased state of the constitution the complaint may arise, it will, as a general rule, be found highly necessary to commence the treatment by evacuating the stomach and bowels. Mild emetics are particularly useful, not only in removing the morbid matter in the stomach, but also in exerting a specific effect on the disease, which if they do not completely remove, they always succeed in alleviating. They are the remedies best calculated for breaking up the morbid association by which the disease is continued, and thereby giving a greater facility to the operation of the alteratives, anti-rheumatics, narcotics, or tonics. Purgatives, likewise, besides their benefit in unloading the intestines of fæces and excrementitious matters, have the more salutary effects of aiding in restoring the healthy secretion of the digestive organs, and in preparing the system for the full operation of the other means of cure.

I. Alteratives.—The medicines composing this class, united with low diet, constituted Mr. Abernethy's plan of treatment of this deplorable disease; and where it has been sup-

posed to be dependent on a syphilitic taint, they have been employed by others. As general remedies they have "unquestionably, in several instances, given great relief, and in a few, effected an entire cure; but still they have been far from being even generally successful."* In cases symptomatic of syphilis, a perseverance in their use may be expected to effect a removal of the complaint.

II. ANTI-RHEUMATICS.—The manifest resemblance observed to subsist between certain chronic forms of rheumatism and many cases of this painful affection, led to an early use of remedies in the latter disease, which had been found successful in the former.

Arsenic.—Among the remedies of this class, this powerful article of the materia medica has been frequently employed, and with various reports of its success. In one instance its exhibition proved injurious, in others unvailing, but in several cases it has been prescribed with great and permanent benefit. The hurtful effects of arsenic on the constitution, when its use is long continued, which is required in this disorder, is a great objection to its employment.

Calomel and Opium.—Mercury, in several of its forms, has occasionally proved successful, especially when carried to the point of salivation; but the preparation of the sub-muriate with opium has been attended with much the most beneficial effect.

Guaiacum.—Dr. Hosack,† observing the analogy between rheumatism and neuralgia, thought that benefit might be obtained by the use of the volatile tincture of guaiac; which, in a case he mentions, in the dose of a tea-spoonful every two hours, produced relief whenever the patient had irritation in the affected part.

Turpentine has effected a speedy and complete cure in

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* Medico-Chirurgical Review.

† See Appendix to Thomas's Practice.

several individuals, where the disease was seated in the sciatic nerve; in others, though relief was experienced, a relapse took place. It was administered in the dose of a dram.

Vinum Colchici.—Mr. Tyrrel* relates a case where this was the only medicine from which the patient derived much relief, and where all the most popular remedies had been taken. The salutary operation of this article on rheumatism, gout, and other painful affections of the asthenic kind, seems to designate it as an appropriate remedy in neuralgia.

III. Narcotics.—Pain seated in the nerves being the characteristic feature of neuralgia, and the prominent effect of anodynes, consisting in the production of torpor of the nervous system, the whole class has been naturally resorted to for relief. Its success has not been commensurate with the expectation excited by its character, and in consequence it is declining in reputation; yet there is reason to believe, that in many instances, it will be found the most effectual class of remedies. A case which came within the writer's observation, in which the administration of tonics, including the carbonate of iron, was attended with no advantage, but which was permanently cured by the use of anodynes, is an evidence in support of the opinion. The individuals of this class of medicines are not all equally active in subduing the complaint, even in the cases in which anodynes may be supposed serviceable—indeed the want of conformity in their operation, cannot be better illustrated than in their effects on this disease. Opium, the most powerful of the class, has been largely prescribed, and almost universally with little permanently beneficial influence, in some cases scarcely producing a transient relief,† while many others, whose general operation is far inferior, have cured the complaint. It would

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* This case was not supposed to originate in rheumatism. See Note to Sir Astley Cooper's Lectures, Vol. II. p. 305.

† Medico-Chirurgical Review.

seem, that those individuals of the class have been found the most sanative, which have the least effect in constipating the bowels, or in otherwise deranging the digestive functions.

The employment of narcotics cannot be limited to any particular state of the constitution. In all they will be required and found valuable auxiliaries. They may be considered as primarily indicated in the variety of the disease, accompanied with spasmodic action: and where it is found connected with a vitiated state of the body, which is independent of a specific disease, as rheumatism, syphilis, or a derangement of the chylopoietic viscera.

Conium maculatum.—The eminently sedative operation of cicuta, would readily suggest it as among the most effective means of allaying the morbid irritability of neuralgia. With this view it was early employed. Dr. Fothergill found it a successful remedy; and it was the medicine principally relied on by Dr. Jackson, of Boston, in the treatment of this complaint. Dr. Willoughby, the distinguished professor of obstetrics in the university of the state of New-York, informs me he has given it in several cases with great benefit. Much more evidence, and some of it quite recent, could be adduced to prove the service of cicuta in neuralgia. It must not, however, be concealed that it has often failed; enormous quantities of the extract, obtained from respectable druggists, have been taken in a short space of time, without procuring even momentary relief. This failure was attributed by Dr. Jackson, to the employment of an inferior quality of the preparation, or the want of precise rules in its administration. "Experience," he says, "proves that unless cicuta be given so as to produce a sensible effect on the system, it seldom exerts its influence over the local affection, but on that being attained, a subsidence of the pain is the immediate consequence." A more probable cause of its frequent failure is its too general use. From the evidence on the subject, it appears that no one of the class of narcotics is more deserving of our confidence than a good preparation of the cicuta. Its use should be commenced in the dose of a grain of the inspissated juice, repeated every two hours, with the addition of a

grain till it amounts to five, or till dizziness or nausea evince its effects on the system.

Ammonia was successfully employed by Dr. Fothergill in the treatment of this complaint; and was also in the hands of Dr. Jackson, the means of effecting a cure in one instance. It was given in the dose of from one to three tea-spoonsful of the watery solution three times a day.

Belladonna.—This energetic narcotic was for some time considered the most certain and prompt remedy that could be employed; but either the danger of its operation on the system, or its failure in fulfilling the character given to it by its introducer, has thrown it into disuse. It was administered in doses to adults, of two or three grains of the extract, or from twenty to forty minims of the tincture, every four or five hours, during the severity of the paroxysms.

Stramonium.—The inspissated juice of stramonium is getting into considerable importance as a successful medicine in neuralgia. In some instances, particularly in young persons, it has effected a cure; and has often produced considerable respite where a variety of treatment has been resisted. Its dose is half a grain three or four times a day.

IV. Tonics.—It has been found that the state of the system preceding and accompanying this direful complaint consists, in a majority of cases, in a debilitated condition of the digestive organs. The frequency of this cause of the disease, and the salutary operation of tonics in removing it, by restoring these organs to a healthy tone, and correcting their depraved secretions, have often led to the abuse of this class of medicines; they have been employed indiscriminately, when so general a plan of treatment is as improper as it would be to give them in every stage of fever. It is not intended to inculcate that their use should be limited to the cases arising from a derangement of the digestive powers; in most protracted cases, especially after persevering endeavours have been made to remove the existing cause, they will be found the most successful remedies in effecting a complete destruction of the complaint.

The habit of body in neuralgia, indicating the employment of tonics, can be so readily conceived by every practitioner, that it is scarcely necessary to mention any of its symptoms; they are those attending a bad state of digestion generally, such as debility, defect of appetite, flatulency, &c.

Cinchona has been tried in a number of instances, and with various reports of its remedial powers. In some cases, related by Dr. Clark, it suspended the paroxysms for some months, but they eventually returned with greater violence than ever. Dr. Palmer exhibited it with much advantage, when the system had been worn down by protracted suffering, confinement, and a long course of mercury.* "It is under such circumstances," he thinks, "the cinchona is principally indicated." Mr. Swan appears to have used it as a general remedy with success. He speaks of it as the best tonic "for strengthening the constitution, and thereby enabling it to counteract the habit which favours the continuation of the irritation."

Sulphate of quinine.—The active properties of the bark residing in this salt, and it having been found in England and France a successful substitute in the treatment of neuralgia, it is unquestionably a better form of the medicine for obtaining its tonic effects, and renders it unnecessary to dwell on the manner of administering the bark. The sulphate of quinine should be given in the quantity of a scruple every twenty-four hours.

Henbane and Zinc.—It ought not to be passed over that in Germany, Dr. Meiglin has employed the combination of a narcotic and tonic. He composed pills of the extract of henbane and sublimed oxide of zinc, and, according to his own statement, their exhibition was attended with great success.† The increased energy given to medicines by their combination, and the character of neuralgia, resting generally upon an irritability and debility of frame, seem to give this union the appearance of great usefulness, and make the

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* Medico-Chirurgical Review.

† Good's Study of Medicine, Vol. III. p. 195.

consideration of similar compounds worthy the attention of the practitioner.

Carbonate of Iron.—No article of the materia medica has acquired so great a reputation for success in the treatment of this painful affection as the carbonate of iron. On its introduction to the profession by Mr. Hutchinson, it received a high character, which the relation of a great many cases, in the practice of English and French physicians, where it happily effected a cure, has been in Europe amply confirmed. In this country it has been found, in a number of instances, a very efficacious remedy; but here have arisen the first serious complaints against its remedial powers, for in several cases it is stated to have proved entirely inert. Previous to the publication of this discrepance of opinion, it was considered as satisfactorily established, that the carbonate of iron, actively administered, was the remedy which had the greatest effect in conquering this obstinate and powerful disease. And it is now to be hoped, for the sake of suffering humanity, that its failure in the cases alluded to, is the consequence of misconceiving, or inattending to the state of the constitution in which it should be administered. In the use of the carbonate of iron it ought to be remembered, that the various other remedies calculated to invigorate the digestive powers, should also be employed.

It is administered in doses of from half a dram to a dram, three times a day; and when the system becomes accustomed to its use, the dose may be increased to two, three, or even four drams.

Diet and Exercise.—These may be regulated by the states of the constitution accompanying the complaint. In the young, robust, and plethoric, the diet should be antiphlogistic; where tonics are indicated they must be nutritive and generous, and wine or malt liquor should make a part of the patient's drink, or, in the absence of these, brandy and water may be substituted. The exercise should be in the open air; the mind should be diverted from business and care, and should be amused by a change of scene, agreeable prospects, and pleasant company.

Conclusion.—The preceding attempt to adapt the various remedies which have been found serviceable in neuralgia to the different exciting causes, is, I am aware, sufficiently vague, but an approximation to correctness will be found of value to the practitioner. That the successful treatment of the disease will depend upon administering remedies on this principle, must, upon a review of the nature of the disorder, be apparent. Thus, in the few cases which may be found to arise from a local cause, it cannot be doubted that the most rational mode of treatment will consist in topical applications; but where the disease originates in a constitutional disorder, it is obvious that its particular kind ought to be ascertained, and that such medicines should be exhibited as are adapted to the removal of this primary affection. If, however, constitutional remedies do not succeed in effecting a cure, local applications should be called in aid, and among these the counter-irritant of acupuncture should certainly be applied; and, if all these efforts at subduing this terrific disease should fail, which we have reason to think will rarely occur, as a dernier resort, resource must be had to the scalpel.

ART. II. *Cases of Strangulated Crural Hernia.* By JOHN W. STERLING, M.D. Fellow of the Royal College of Surgeons, London.

ON the 15th August, 1815, I was called to visit Mrs. C. P. a cheerful widow, aged 71 years. She had been occasionally subject to retention of urine, which appeared to be her sole complaint at the time of the present visit. Her pulse being regular, and bowels open, twenty drops of the muriated tincture of iron were prescribed, which had the effect of promoting the desired discharge. Since that period she has been now and then similarly affected, and always relieved by the same remedy.

Aug. 16th.—She complains of some uneasiness across the lower part of the abdomen, and is desirous of having a blis-

ter applied. Ordered accordingly. Has had a gentle evacuation from the bowels this morning.

17*th*.—Pain or uneasiness removed; bowels constipated. Habeat submur: hydrarg: gr: vj.

18*th*.—Bowels still constipated; pulse slightly accelerated, but not tense. H: ol: ricini ℥ij.

19*th*.— 8 o'clock A. M. The oil has not operated; no distress at the stomach. Cathartic repeated.

12 o'clock M. Still no evacuation from the bowels; feels a sense of constriction and pain extending across the hypochondriac and epigastric regions; the pulse but little excited, no vomiting, but occasional eructations. I now suspected that there must be some obstruction in the bowels, and on examination discovered a tumour on the right side nearly as large as a hen's egg, and lying upon Poupart's ligament. Considering that this was a strangulated crural hernia, I resorted to the taxis, but in vain. Ice was directed to be kept constantly applied to the tumour.

4 o'clock P. M.—Repeated the taxis, but again unsuccessfully. Requested another opinion.

In the evening Dr. Valentine Mott attended in consultation, who attempted to reduce the hernia, but could not accomplish it. As there were no symptoms present indicative of immediate danger, gr: xv. of calomel were given, and poultices, or fomentations, alternated with ice, directed as external applications.

Aug. 20*th*.—9 o'clock A. M. Dr. Mott performed the operation for strangulated crural hernia. On cutting through the hernial sac the omentum presented itself, but there was no intestine visible, neither could any be discerned by pulling the omentum to one side or the other. Dr. M. then cautiously cut and tore through the omentum, until he came down to a small knuckle of dark-coloured intestine; so that there was a complete omental sac formed, in which the protruded intestine was completely enveloped.* The stricture being

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* This may account for the comparative mildness of the symptoms attendant upon the strangulation, and for its long continuance without pro-

dilated by introducing the knife flatwise upon the extremity of the finger, and then turning its edge upwards, and incising towards the umbilicus, a small additional link of intestine was drawn down, which brought into view that portion of it which had corresponded to the crural ring: the protruded bowel was easily returned, but the omentum being crepitous, was allowed to remain in the wound. Immediately after the operation there was a copious evacuation from the bowels, which being repeated, cathartics were deemed unnecessary.

21*st*. Some tenderness of the abdomen with frequent and contracted pulse. Twelve ounces of blood were drawn from the arm, and a blister applied over the abdomen. On the following day all inflammatory symptoms were removed, and on the 21st September, the wound was entirely healed.

On the 23d June, 1828, I was again called to this old lady, now seventy-four years of age. She had been complaining for a few days of considerable pain in the bowels, for the purpose of removing which she had taken some hiera picra, (pulv. aloes c. canella) but without much benefit. On the evening previous to my visit she was seized with vomiting, which had not ceased when I called upon her. Bearing in mind her former difficulty, I particularly inquired respecting the tumour in the groin, especially as it was very prominent whenever she was in the erect posture and the pad removed; but at present, being recumbent, it was not discernible. The eccoprotic mixture was ordered.

4 o'clock P. M. Has rejected the mixture. On further examination, I distinguished a small tumour on the left side, which was a crural hernia. I applied the taxis, which proving unsuccessful, ice was ordered as in the preceding case.

7 o'clock P. M. Repeated the taxis, but with no better success than at the first attempt. The pulse being frequent, strong, and sharp, I considered that no time should be lost, and therefore, requested another opinion. Dr. A. H. Stevens

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ducing mortification of the intestine, as the neck of the intestinal loop was shielded from the direct pressure of the ring by the omentum which completely surrounded it.

was called in consultation, who applied the taxis, but finding it ineffectual, decided that the operation should be performed immediately. The operation for crural hernia was, therefore, performed by Dr. Stevens, and the contents of the hernial sac were found to be omentum, and a small loop of dark-coloured intestine situated behind the former. The anterior portion of the omentum was cautiously divided, and the intestine detached from its adhesions with the finger; the stricture was then dilated upward and inward, and to such an extent as to allow the end of the fore-finger to enter the crural ring. The intestine being emptied, by gentle pressure was returned. A portion of the omentum was also returned into the cavity of the abdomen; another portion was pressed up as a plug into the crural canal,* and the remainder being closely adherent to the hernial sac, was left in the wound. The edges of the wound were then brought and kept together by means of adhesive straps, suture, and bandage.

H: enema statim. The injection not bringing away any fæces, she was directed to take two ounces of the following infusion every hour, until it operated on the bowels.

℞ Sulphat. magnesiæ - - ℥ij.
Fol. sennæ - - - - ℥ss.
Aq. bullient. - - - Oss.

27th. 9 o'clock A. M. Has taken the whole infusion which has operated. Febrile symptoms being present, the following prescription was ordered:

℞ Nitrat. Potass. - - - ℈iv.
Antimon. Tart. - - - 1 gr.

Misce et divide in pulv. No octo. One of these powders to be taken every two hours.

7 o'clock P. M. Some tenderness of the abdomen being present, ten ounces of blood were drawn from the arm, and a large blister applied over the abdomen.

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* There has not been any descent of the hernia on the left side since the operation was performed, notwithstanding there has been no support given to the part subsequent to the cicatrization of the wound.

28*th*. 9 o'clock A. M. The alvine evacuations were very frequent throughout the whole of yesterday, but some inflammatory action persisting, the antimonial solution was ordered, and at 6 o'clock P. M. she was again bled to the extent of ℥xi. From this time she continued to improve daily, and on the 25th July the wound was cicatrised.

On the 8th of August I called to see this old lady, and found her in good health and quite cheerful. She easily ascends and descends two pair of stairs daily; with the assistance of a cane, however, which she has been obliged to carry for some years, in consequence of a fracture of the right cervix femoris, which occurred the winter preceding the first operation for hernia. It may not be amiss to state that Mrs. P. bore the operations with the greatest fortitude, and it is principally on account of their successful result in a person so far advanced in life, that I have been induced to record them.

There was one circumstance, however, on which I would beg leave to offer a few remarks; I never have read of an instance wherein the omentum was protruded before the intestine, in such a manner as to form a complete pouch enveloping the latter on every side. Nevertheless this was the fact in the case first related, and I can readily conceive how it was effected. The patient was lame in consequence of a fracture of the neck of the right femur, which, together with age, obliged her to walk with a considerable inclination of the body forwards and to the right side, leaning on a staff. This position would naturally approximate the greater curvature of the stomach to the pelvis, and thereby tend to place the inferior part of the omentum directly over the internal opening of the crural canal; so that if a portion of bowel should be forced through this canal, it would either perforate the omentum, or carry an envelope of this membrane before it; consequently, if the latter should be the case, there would be an omental bag, embracing the intestine, within the proper hernial sac. Whether this be a proper explanation of the manner in which this bag is produced or not, is a matter of no great moment; but it is a matter of great importance to be aware that such a state of things may exist; otherwise, as

the omentum, in a similar case, would completely envelope the intestine, the protrusion might be considered as an epiplocele simply, and if treated accordingly, the most serious consequences would follow; for it is evident, should the omentum be returned, without liberating the intestinal protrusion locked within it, that the strangulation would be liable to continue, and death consequently ensue. The same event would equally follow if the omentum should be allowed to remain in the wound after its stricture had been divided, for the omentum itself may gird the intestinal loop which it envelopes. If any appearance of the protruded omentum can afford an indication that a portion of intestine is contained within it, I would say that it will appear smooth, tense, and spherical. This was the appearance in the case under consideration; but it should not be depended upon, especially as the omentum contained within a hernial sac, may, so far as regards itself, be cut into with impunity.

ART. III. *A Case of Pseudo Syphilis.* By JAMES FOUNTAIN, M.D. of Yorktown, Westchester County, New-York.

ALTHOUGH syphilis has probably existed in some manner from the earliest ages, and has been generally known since the discovery of America by Columbus, yet even at the present day, its etiology, pathology, and treatment, are far from being settled. Some contend that its cause is a specific poison, sui generis, and always identical in essence, handed down to posterity, and modified by peculiarites of constitution and local circumstances; whilst others maintain that its causes are various, arising at different times from filthy morbid secretions, generating a multiplicity of venereal affections. Nor are writers more unanimous in their pathology, shaping their theory to that of its supposed causes. Some have attempted to prove that its varieties depend on the different textures in which they are located, being in one a simple inflammation, capable of being overcome by the natural efforts of the system, and in others influenced by different laws, pre-

senting different aspects and pursuing different courses. Hence the origin of the distinction of syphilis and pseudo-syphilis. Neither are practitioners more uniform in their mode of treatment than in their theories. Whilst one set roundly assert that mercury is necessary in every case to ensure complete success, another as boldly affirm that it is never required. This diversity of opinion is easily accounted for from the well known fact that syphilis, when it first broke forth upon the world, was a highly formidable and dangerous disease, assuming the character of the plague, and attended by violent fever. Passing through so many constitutions, it has at length become a truly protean disease; and nothing but a perpetual and vigilant attention to its variations, can make a practitioner a competent and adroit manager of this loathsome enemy to domestic happiness. Hence the necessity of faithful reports of all cases deviating from the ordinary manifestations of this disease. For this reason I presume to introduce the following.

The subject of this communication was Mrs. B. aged sixty-four, of an unblemished character and good constitution, having suffered no sickness except the venereal, which she had legitimately contracted six or seven times. Two nights prior to my visit, she had had connexion with her husband for the first time in five years. During this interval she had enjoyed uninterrupted health, being fully determined to avoid the consequences. Though such accounts may seem dubious, nevertheless, I have no doubt of her veracity. Immediately previous to this lapse of time, she had suffered a most obstinate and protracted venereal affection, excited in the same manner by the first indulgence after an abstinence from matrimonial gratification three years. The invasion of her former disease being so unusual, and the circumstances so unaccountable, I suspected her narrative, for the husband seemed wholly free from any symptom of foulness, and solemnly declared his innocence and soundness for several years. But the two attacks and characters of the affections being identical, and the circumstances testified by both parties, separately exam-

ined, so exactly coincident, I could no longer withhold my belief.

November 11th, 1827. Immediately after coition Mrs. B. felt a severe pain in the loins and back, and a burning sensation *within;* slept none through the remainder of the night; on the following morning about 9 o'clock felt chilly, and an ague was the result; this lasted an hour, when it was succeeded by fever with thirst, headache, &c.; drank some warm teas, and took a dose of Epsom salts; at night much the same. 13th. I was called early in the morning and found her as stated; pulse 100, hard; tongue furred; thirst; dry skin; tenderness of the lower part of the abdomen, and a smarting and burning about the vulva, constituting, I thought, *vaginitis.*

V. S. ʒxvi. Sulph. magnes. ℥j. to be followed by a powder every two hours of nitrat. potass. 15 grs. tart. ant. 1 gr. with copious draughts of elm tea.

14th. Symptoms rather milder; repeat the salts and continue the powders; 15th, much the same; continue the plan; 16th, worse; small red papulæ began to appear, and continued breaking forth daily, greatly alarming the patient. I had assured her that she had no syphilis, but this eruption appearing, *just in the old way,* as she observed, I could no longer quiet her fears. Now, said she, I must take the mercury, and the sooner the better. However, I prevailed on her to persist in the antiphlogistic and alterative plan already commenced. The course stated, with some little variation, was pursued. The symptoms abated, but they soon rose, attended with all the appearances of Dr. Carmichael's papular venereal disease, and on December 11th, I was induced to abandon the above means. I could no longer resist her solicitations for the *strongest kind of mercury.* Oxymurias hydrarg. ℈j, brandy 1 pint, dissolve; of this she took a table spoonful three times a day. December 18th, symptoms much mitigated; continue the medicine. 25th. Every symptom vanished. Her gums all this time only slightly affected. No other medicine was taken except an occasional anodyne.

Her last attack, five years ago, as already observed, was

precisely the same as this; but having given her calomel, and used mercurial frictions freely, I mistook the papular eruption for *erythema mercuriale*, and laboured under this error for several weeks, until an aged practitioner was consulted, who advised the *corrosive sublimate* as prescribed, and it accomplished a cure after a faithful use of calomel and blue ointment had failed. This led to the attachment of my patient to the strongest kind of mercury. Having briefly detailed two identical occurrences in the same individual, I shall leave the reader to his own reflections and inferences.

ART. IV. *Case of Rupture of the Uterus, in which Gastrotomy was performed.* By EDWARD DELAFIELD, M. D. Professor of Obstetrics in the University of the State of New-York.

RUPTURE of the uterus is an accident so generally fatal, that it is desirable that the profession should be made acquainted with every case of it in which an attempt has been made to apply a remedy. The one employed in this particular case, the operation of gastrotomy, has in several instances succeeded; but it is equally desirable that the unsuccessful instances should be put on record. With this view, the following case is published.

Mrs. Cannon, of Brooklyn, was taken in labour on Sunday August 26th, at about six o'clock in the evening. The pains soon became severe, and continued with increasing rapidity and force during the whole night and the following day. The os tincæ becoming completely dilated, and the membranes protruding in a large tense bag, the latter were ruptured, and the waters discharged on Monday afternoon. The pains became still more severe, and with very slight intervals until eleven o'clock on Monday night, when they suddenly ceased, and a slight hemorrhage occurred from the uterus. The patient immediately vomited a small quantity of dark greenish fluid, became excessively prostrated in strength, with difficulty of breathing and extreme anxiety, and the pulse became extremely rapid and feeble. Under these circumstances she

was bled by the attending physician, and, as was stated, with much relief.

At two o'clock on Tuesday afternoon, fifteen hours after the sudden cessation of the pains, I was called to this patient, and learned the foregoing history of her case. I was also informed, that upon an examination being made a few hours before I was summoned, the presenting part, which previously to the cessation of the pains had been readily perceived low down in the vagina, had disappeared, and was entirely out of the reach of the finger. The form of the abdomen had entirely changed also, and extreme tenderness on pressure was felt in every part of it.

From this history of the case, it was evident, that after an uncommonly severe labour of nearly thirty hours duration, the uterus was ruptured, and the child passed into the general cavity of the abdomen. Upon examining the patient, it was immediately demonstrated that this was the deplorable nature of her case. The hand placed upon the abdomen detected the outline and limbs of the fœtus, distinctly through the parietes of the cavity; and the whole tumour was much higher up than the natural one, and of a different form. Upon introducing the hand into the vagina, it passed readily into the uterus. No fœtus was discovered, and the cavity of the viscus was found to contain nothing but a coil of intestine, passing through a large rent in its left side.

The patient was, notwithstanding, in a more comfortable condition than could have been expected after so alarming an accident; and was stated to be decidedly improved in strength, and altogether better than immediately after its occurrence. She complained of no pain, except upon making pressure upon the abdomen; her pulse, although feeble and rapid, was less so than it had been.

It was, however, so evident that without removing the child from its present situation, the patient must quickly perish, that after explaining to her the nature of her case, I proposed the removal of the fœtus by an incision into the cavity of the abdomen; and the operation was immediately assented to, both by herself and her husband.

There was but one other alternative than this operation which could be looked to for relief; and that was cut off by the length of time which had elapsed since the rupture occurred; viz. introducing the hand through the rent in the uterus, drawing the fœtus through it, and delivering *per vias naturales.* Examination had proved this impossible; for the uterus, although it admitted the hand into its cavity, closely embraced it, and the fissure was contracted in such a manner as not to admit even a finger through it. To have forced the hand through it, under these circumstances, would probably only have hurried on the fatal result; and indeed the delivery could not probably have been thus accomplished at all. The operation of gastrotomy was therefore decided upon, and performed at six o'clock the same evening, in the presence of Drs. J. K. Rodgers, Cornell, M'Caffray, and M'Givney.

An incision seven inches long was made in the linea alba, terminating just above the pubis. Upon opening the peritoneum, a large quantity of bloody fluid gushed out; and when the opening was prolonged through the whole extent of the incision, the breech of the fœtus immediately filled and pressed through it. It was delivered as it lay, by the breech; the head passing through the incision with some little difficulty, which was obviated by pressing the chin down upon the chest. The child was of large size, and weighed probably at least nine pounds. Immediately after the delivery of the fœtus, the placenta, which had also escaped into the abdominal cavity, was removed. A portion of membrane was then observed lying in the intestines, which for an instant was supposed to be the omentum. On closer examination, however, it was found to pass under some portion of the small intestines, and to be a part of the membranes of the ovum. It was therefore removed. The surface of the uterus, which now lay entirely exposed, was then examined; and it was found that the intestine, which was previously felt within its cavity, must have been withdrawn from it while the fœtus was passing from the abdomen; as the rent was distinctly felt free from any portion of intestine. All the intestines within view, together with the peritoneum lining the abdomen, were observed to be much inflamed.

The quantity of blood lost during the operation was extremely small, not exceeding half an ounce. The intestines did not protrude at all at the incision, as was anticipated; and by supporting its sides, there was no difficulty in retaining them entirely within the abdomen.

The operation being finished, the wound was closed with sutures and adhesive plaisters, and the patient removed to bed. She had borne the operation remarkably well, and although the pulse was somewhat more feeble, her strength was not perceptibly diminished. A slight tendency to vomiting was the only unpleasant symptom which showed itself.

She was left for the night under the care of Dr. M'Givney, and I saw her again at nine o'clock the next morning. She had slept well for some hours after the operation; but about five o'clock in the morning, after an attack of vomiting, she sunk so rapidly as to become speechless and apparently dying. Wine was administered frequently in small quantities, and the patient revived. She continued improving until I saw her, when I found her apparently as well as immediately after the operation; but still complaining of occasional sickness and vomiting. After my visit, the vomiting again came on with increased violence, and continuing almost incessantly until ten o'clock, the patient expired.

Permission to examine the body could not be obtained.

This patient had previously borne a child, which had been delivered by the forceps. The cause of the difficulty could not be learned, as the labour occurred in Ireland, whence the patient had arrived within a few years.

ART. V. *Report of Meteorological observations made in the City of New-York, from May 1st, 1827, to May 1st, 1828. By order of the Medical Society of the County of New-York.* By JOHN BAXTER, M.D. &c. Secretary of the Committee.

A REGULAR journal has been kept by me since May 1st, 1827. And the following are the results of my observations.

May. The barometrical pressure varied very little during this month, for although on the first day of the month it was

as low as 29 inches $\frac{4}{10}$ths, it arose next day to 29.7 which to 29.9 was the most usual height, rising but one or two days to 30.2; the average height may be stated at 29.8.

The temperature of this month was very mild, no frost occurring; the lowest temperature being 38°; the highest towards the last, 85°; difference being 47°, and medium 61°.5. From 70 to 80° was most usual at noon. For half the month the winds were East, the other W. and N.W. It rained on eight days; 2 inches $\frac{68}{100}$ths of rain having fallen, the dampness generally but small.

In June, the changes in the barometrical pressure were still less than in May, the mercury standing from 29.6 to 30.25, averaging 29.9, difference being $\frac{65}{100}$.

This was considered a cool month from the great moisture, although the thermometer was raised several times to 90 and 92°, and not falling below 45°; not quite two inches, however, of rain fell during the whole month. The winds mostly from the South. Rained on eleven days. Deaths this month 340.

July. The changes in the barometer were less than the preceding months; the lowest being 29.75, the highest 30.15, the difference $\frac{4}{10}$, and the average 29.95.

The temperature was high, rising to 100°, and falling to 60°, difference being 40°, and averaging 80°.

It rained on 9 days, 3.74 inches.

The winds were mostly from W. and N.W.

The deaths were increased this month to 576.

August. The barometer ranged from 29.6 to 30.3, making a difference of $\frac{7}{10}$ths of an inch, and an average pressure of 29.95 inches. The first week of this month was warm, and the thermometer as high as 102° on one day, but afterwards it was cool, and as low as 51° at night; thus the greatest difference was 51°, and the average 76°. Beautiful corruscations appeared in the western horizon a little after 9 o'clock in the evening, forming an arch to the east, and passing over head disappeared by 11 o'clock. Much rain fell, viz. 7.74 inches on 7 days. The winds mostly S. and E. some N.W.

September. The range of the barometer has been the same as the last. The first two weeks cool and dry; thermometer as high as 92°, and as low as 48°; difference 44°, average heat 70°; at the middle of the month a storm gave 3.3 inches of rain. Winds mostly S. and E. Deaths 426. The Aurora Borealis was seen twice this month.

October. The barometrical range still greater this month, viz. 0·9 inches, from 29.35 to 30.25, averaging 29.8 inches. The temperature the first two weeks at a stand, falling afterwards from 82° to 35°; difference 47°; average 58°; weather cloudy and overcast; rained on 10 days 6.$\frac{3}{10}$ inches; very moist. Number of deaths 440.

November. The change in the barometrical pressure exceeded an inch this month, varying from 29.3 to 30.35, making the average height 29.825.

The temperature also changed very rapidly, so that it became one of the coldest months in the season; the thermometer falling to 23° from 70°, making the difference of 47°, the average being 46°.5. The quantity of rain which fell was nearly equal to that in August, viz. 7.12 inches; the wind mostly W. and N.W. Number of deaths 392.

December. The barometer fell still lower this month, to 29.25, the highest being 30.35, difference 1.10 inch, average 29.95. The thermometer fell to 14° this month from 61°, making the same difference as last month 47°; the average 37°.5. The rain which fell measured 4.3 inches. There was a vast quantity of misty and foggy weather; winds mostly from the E. and S.E.

January. The barometrical change was as great this month as the two last; viz. 1.10 inches, although the fall was not so low as the last, being to 29.4 inches, averaging 29.95. The rain which fell measured 4.$\frac{2}{10}$ inches, the wind varying from all points of the compass. Deaths not ascertained. The temperature at the lowest this month being down to 9°; the highest was 59°; difference 50°; average 34°.

February. Barometrical change this month exceeded the four last months, making the difference 1.15 inches; viz. from 30.45 inches to 29.3, the average being 29.875. The

temperature was also low, the highest being 66° the lowest 13°, making the greatest difference this year, viz. 53° ; the average 39°.5. There was also considerable foggy weather, and a slight flurry of snow ; 3.18 inches of rain fell ; there were many South and East winds.

March. The change in barometrical pressure was 0.9 inches, the highest being 30.4 inches, the lowest 29.5 ; the average 29.95 ; the difference in the temperature this month was 61°, the thermometer rising from 19°, at the beginning to 80°, towards the last, the average being 49°.5 ; 5.04 inches of rain fell during the month. The most prevalent winds were from the S. or E.

April. The changes of the barometer was but 0.7 inches ; viz. from 30.2 inches to 29.5 ; average 29.85. The temperature, which was between 76° and 30°, varied 46°, and the average was 53° ; the winds mostly from the East ; 4.42 inches of rain fell.

These observations were usually made three times a day, and the object was, with regard to the thermometer, to obtain the highest and lowest range in twenty-four hours. The time of day which is the hottest, varies according to the season ; in summer, especially in the greatest heat of summer, the thermometer does not begin to decline until after 3 o'clock ; in winter it will frequently decline after 12, almost always by 1, certainly by 2 o'clock. The lowest range occurs between 12 at night, and 5 in the morning, usually about 4. For obtaining these points the self-regulating thermometer is the most useful, and altogether the best kind of instrument, were it not for its great liability to get out of order, which, however, a little experience may teach how to remedy with some trouble ; for instance, it having got out of order, I put it into my pocket and took it to the instrument maker's, when on looking at it to point out the difficulty I found it right, I put it into my pocket again and returned home, on my arrival I found it again deranged, when with some difficulty I repaired it myself.

The times for making the other observations have been as early as possible in the morning, at noon, and the last thing

at night. I have not noticed in this report the variations of the hygrometer, because with the imperfect instrument which came into my hands, and which I retained till very lately, I soon perceived that the observations could be but little depended upon; in fact it is an instrument of very little use for ascertaining the moisture, as the number of circumvolutions of the hand could not be marked; but by an additional wheel given to it by Mr. Pike, this defect is in a great measure now removed, and more accuracy produced.

Upon reviewing the Journal for the past year, it will be seen that the quantity of rain which fell for the past ten months, ending the 1st of May, was uncommonly large; the whole quantity for the year being 53.94 inches, which exceeds the yearly mean for many years of any of the places given by Mr. Dalton, except Kendal, England, which is exactly the same. That of London for twenty years, is stated to be 20.68 inches, and Liverpool 34.11 inches, and Manchester 2 inches more; thus for this year at least our climate is not exceeded by that of England in the quantity of rain. The months in which the most have fallen were August, November, and October, in proportion of 7.74 7.12 and 6.30. And although the temperature has been no ways less than usual by the thermometer, no epidemic of any kind prevailed.

The reason of this greater moisture and rain having prevailed this past year, is not exactly apparent or accounted for. That constitution of the atmosphere which prevails in relation to heat, moisture, and winds in any region, and which is called climate, is dependent on the latitude, the situation of the place more or less elevated above the level of the sea, and its position as interior or nearer the sea. Much has been said with respect to a change which our climate has been supposed to have undergone for a number of years past, especially in point of temperature, and perhaps with considerable truth. That we are subject to great extremes, as well as a variable climate, cannot be denied, and it has justly been remarked, that New-York had the summer of Rome, and the winter of Copenhagen.

We, however, know ourselves, as well as from what our fathers have told us, that our winters have mitigated very much, and the last winter was especially marked by the entire deficiency of snow, none having fallen to lie five hours, from November to April.

In accounting for the fall of rain, Dr. Hutton, of Edinburgh, maintained that "the quantity of vapour capable of entering into the air, increases in a greater ratio than the temperature;" from whence it is inferred, that whenever two volumes of air of different temperatures are mixed together, each being previously fully saturated with vapour, a precipitation of a portion of vapour must ensue, in consequence of the mean temperature not being able to support the mean quantity of vapour; and, as according to Dr. Ure, "in a free atmosphere, the upper regions are colder in consequence of the increased capacity for heat of the air, by the diminution of the density," we may easily account for the fall of rain; but the increased quantity of vapour that must rise to cause the greater fall of rain, must be ascribed to some other cause, and this can be no other than the mitigation or more equal temperature of our winters, and this change has been very satisfactorily accounted for by the increase of our popula- to the North and West, the removal of wood, and the cultivation of lands, by which less water is locked up and for a shorter time by the frosts of winter, and thus a greater quantity of vapour is free to fall in rain. If this chain of causation be correct, there is a greater probability of the effect increasing instead of diminishing, even to the establishment of rainy seasons to endure for some time.

But another circumstance must not be overlooked as having considerable influence on this subject, viz. electricity.—Mr. Luke Howard, a scientific meteorologist of Great Britain, and who was eminent for his classification of clouds, has considered this as one of the acting causes explanatory of the fall of rain, from the opposite states of electricity possessed by clouds formed in different points of the heavens, and brought into contact with each other, when by restoring an equilibrium, a consequent precipitation follows.

That this is, however, but a secondary agent, is confirmed by a comparison made between the present season, so far as it has passed, and the former. The summer of the last year, (1827), notwithstanding the great fall of rain, was remarkable for the few manifestations of electricity by thunder and lightning, and this season, with also a large quantity of rain, we have already had powerful discharges of the electric fluid, with much thunder and vivid lightning, and Mr. Howard considers the electric effect as applicable to continued rain as to occasional showers, from the supply being continued to the clouds in proportion to the consumption, by means of evaporation which returns it during rain. Thus, then, the supply of vapour, and the establishment of a mean temperature, may be considered as necessary to produce rain, modified occasionally by discharges of electric fluid, either silently or with noise.

But whether electricity may be considered as a necessary link in the production of rain, either attended with thunder and lightning or silently, may become another question in meteorological science. A satisfactory explanation of thunder never yet has been offered to the world. The facts are every day presented to our view, but whether to ascribe them simply to the condensation of vapour, or to the combustion by means of the electric fluid of inflammable gases collected in the higher regions of the atmosphere, may admit of a doubt.

We have rain in winter without thunder, except in mild seasons, and in summer, when those phenomena most usually occur, those operations are going on which supply most abundantly the inflammable gases, and which are stopped in severe winters. In summer we frequently have rain without thunder, sometimes lightning unattended with thunder, but never thunder unaccompanied by lightning. All of which phenomena are better explained by the combustion of gases than otherwise, although the occurrence of one does not render the other altogether improbable.

Note.—Since writing the above I have seen, though how authentic I cannot pretend to say, published accounts, by

which it appears that there has been an increase of moisture in Europe also, as well as in America, as the rain which fell in Great Britain in December, was unusually great. At Wigton it amounted to 4 inches; at Edinburgh 2; at Gosport 5; and at Kendal, which, according to Mr. Dalton, averaged for twenty-five years 6.084 inches, it was 10.395. In Paris, which in 1819–20 had 131 rainy days, had last year 167 days of rain and snow.

ART. VI. *An Essay on Milk-sickness.** By LUNSFORD PITTS YANDELL, M.D. of Murfreesborough, Tennessee.

IT has long been a favourite belief among medical philosophers that the pestiferous epidemics which, from time to time, have visited the earth, have afflicted the inferior order of animals as well as man; and that they have been preceded, accompanied, or succeeded, by extraordinary commotions in the planetary system. The atmosphere has been supposed to be loaded with the seeds of disease, which fixing themselves in domestic animals, in birds and in fishes, spread desolation and death over the whole face of animated nature. Credulity and superstition have doubtless had their share in creating this belief, and the influence has perhaps been exaggerated; but it is a fact that of the distempers mentioned by Homer, Thucydides, Lucretius, and Dr. Pym, a characteristic feature was, that "mules first and dogs they struck," and afterwards man himself. It is no objection to this opinion that while some species of animals languish and die, others appear to prosper and multiply as in an element peculiarly congenial. Rotation is known to be the order of nature. One race of animals perishes and vanishes away to furnish subsistence to a succeeding and different species.

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* In the first volume of this Journal, we published some notices by Drs. L. C. Beck, A. Coleman, &c. of this singular disease, which prevails in some of our western states. The paper which we now present to our readers, furnishes additional details in relation to it, of a very interesting character. It is taken from the third number of the "Transylvania Journal of Medicine and the associate sciences," an able periodical, recently started at Lexington, Kentucky.—(ED.)

The disease which it is our design to describe commences, not indeed, like the distemper of the poet, sent by the gods, upon 'mules and dogs;' but its origin is always among herbivorous animals. Man is never affected except in the second instance, and then through some of the animals which minister to his comfort.

Milk-sickness is confined, so far as we are informed, to the United States, and has not yet found a place in any system of nosology. Its character is, in fact, but imperfectly understood, and the cause from which it springs is veiled in uncertainty. Additional facts are still wanting, greater amplitude of discussion is required, to place the subject on incontestible ground. Without a hope of being able finally to settle the question, it is a sufficient apology for our taking up the subject at this time, that wherever the disease prevails it is singularly fatal, and that we hope to furnish some facts not heretofore published.

Local in its character, this disease prevails only in particular districts of country,—in regions marked by some peculiarity of feature, and generally, we think, in the vicinage of mountains or elevated land. So far as our acquaintance extends, it is limited to the middle, southern, and western states. It is to be found on the Yadkin river, in North Carolina, and in different parts of Georgia and South Carolina. Some sections of Virginia and Kentucky present it as an annual complaint. The Sequache valley, one of the most salubrious and delightful spots in our state, is subject to it. It prevails in Franklin county, in the valleys of the Cumberland mountain, and among the *Mill-stone knobs* of Sumner and Smith counties. Our remarks will be confined to the disease as it presented in the latter place, this being the source from which we have derived our principal information, referring to other places only for illustration.

The Mill-stone knobs are the termination of the hills dividing Barren from Cumberland river, among which the different branches of Goose creek take their origin. They rise two or three hundred feet above the level of the Cumberland, with sandy, sterile summits, and stretching towards the south,

terminate within a few miles of the river, in a rich and beautiful country. Covered as these hills are with the profusion of grass and herbage peculiar to a fertile soil and southern sun, and from their abruptness, being sparsely populated, they are the resort of the cattle of the neighbourhood. Like most small streams in this climate, the branches of Goose creek run only in the winter and spring, and early part of summer, leaving during the hot season masses of stagnant water to the influence of the sun; and, as might be anticipated, the inhabitants are the subjects of bilious disorders. No part of our state suffers more seriously from these visitations. Annually, diarrhœa, cholera, dysentery, and fever, in all their grades and changes, are as regular in their appearance as the return of the seasons. Cases occur, upon these water-courses, which border closely upon the malignancy of yellow fever.

Milk-sickness prevails, for the most part, during the season of vegetation. The first years of our life were passed on Goose creek in the neighbourhood of the disease, and the cases which we remember to have observed, appeared during the summer. Dr. Sharpe remarks that it is most common during the months of March, April, May, September, October, and November.* Cases occasionally occur in winter, but they are rare. My father, the late Dr. Wilson Yandell, in a letter to me on the subject, remarks, "it is most prevalent, if my memory serves me, from the latter part of May till after the autumnal frosts, scarcely prevailing in winter. About the first of June, if I am not mistaken, it is worst, though very dreadful throughout the summer when cattle are permitted to run at large." Dr. Thompson, a physician of this county, of great practical skill and accuracy of observation, in a letter to me says, "the season of the year at which the disease is most prevalent, is the fall, after vegetation has been mostly killed; about the time of white frosts, and from that time till the cold of winter becomes constant. The next worst time is about the appearance of vegetation in spring; though cattle sometimes suffer if the winter is mild, after un-

* Medical Recorder, Vol. VI. p. 264.

usually warm spells, in December, January, and February." Writing from memory alone, unassisted by notes, there is a slight discrepance between the accounts of the latter gentlemen as to the season during which it is most fatal. Accident might have thrown more cases in the way of one than the other at a particular season, or cases occurring at one time might have impressed them more than others at a different time, and thus there would be a disagreement; but both of them agree with Dr. Sharpe, that the disease belongs to the period of vegetation, and of the cases on record a majority occurred in summer. Of those mentioned by Dr. Sharpe the two first appeared in June, two in May, and one in April, one only existing in winter; a chronic case, which had endured through two or three seasons.* If it is less prevalent during mid-summer and the last of the hot season, it is because cattle at this time are confined to pastures.

The disease attacks alike the aged, the middle aged, and the young, and unlike most maladies, seems regardless of the partition wall which nature has erected between the different classes of animals. Cattle and sheep are continually its victims when not confined to their enclosures. Deer are often found dead among the hills where the poison is supposed to exist, and their flesh imparts disease to animals using it as nutriment. Often when pursued in the chase their strength fails, and they are taken in an unnaturally short time, owing to disease; and the experienced huntsman, under these circumstances, refuses to eat them. Wild turkeys inhabiting the Mill-stone knobs are frequently found unable to fly. Opossums, raccoons, foxes, wolves, and other wild animals of prey, are often found dead near the carcasses of cows and sheep. Buzzards and carrion crows die in immense numbers about the putrid bodies of cattle. "Nine of the cattle of Mr. Cathey," (as my father informed me) "having suddenly died of the poison, these animals were attracted in great numbers, and repairing to a branch hard by for drink, after their fatal repletion, died in such numbers that, a freshet shortly

* Med. Record. loc. cit.

afterwards occurring, they were floated down so as to make dams across the stream." Hogs and dogs are its common victims when the bodies of poisoned animals are not burnt, or protected from them by an enclosure. A petition was presented to the last legislature of this state praying the passage of a law fining all persons who should be guilty of a neglect to burn or secure the carcasses of animals under their eye, supposed to have perished from the poison. Even poultry have been known to suffer with the disease from feeding upon poisoned animals dying within their reach; while calves, colts, and lambs are its most frequent subjects, imbibing the malady from the mother's milk.

The cause of Milk-sickness.

"*Hic labor extremus*"—here we enter upon contested ground—and here, as in too many cases where medicine is concerned, we are compelled to acknowledge that the nature, and even name of the offending agent '*atra caligine mersæ.*' The opinions started on this subject are four:

1. That it is a *mineral poison*, imbibed with the drink;

2. That it is the same poison, suspended in exhalation by the sun, during the day, and deposited upon herbage, with the dew, at night;

3. That it is a species of *bilious disorder*—originating in a cause common to it and autumnul fevers;

4. That it is a *vegetable poison*, taken in by cattle with their food, and imparting its deleterious qualities to their milk and flesh. The last is the opinion which we maintain.

To the first opinion we would object, that if a spring or stream of such poisonous waters, existed any where in these hills, it must long since have been discovered by some of the many labourers who have resorted thither to procure millstones; or by persons who, in the pursuit of pleasure or business, have wandered over every part of their summits. Running as such a stream would, some distance, and mingling its waters with other streams, its deleterious qualities would become widely diffused, and in a short time generally known. Such is not the fact; no stream or fountain is suspected. And virulent as many of the mineral poisons are, and rapidly as

they destroy life, we are not yet acquainted with one capable of imparting its qualities to the flesh and secretions of the animal poisoned to such a degree, as to render them detrimental to other animals using them as food. This objection applies with equal force to the second opinion; and, it may be continued, the symptoms are not precisely those which attend poisoning from any known mineral. Besides, if such an exhalation existed in this country,—as of arsenic, or any other poison—which, descending with the dews of the evening, was fixed on vegetables, man himself, from eating fruit, cabbages, &c., would become in some cases directly its victim;—a circumstance which, so far as we are informed, has never yet occurred. Cultivated pastures, in this case, would not eradicate it; a hedge or fence would not exclude it; but floating in the atmosphere, it would descend alike upon herbs surrounded by an enclosure, and those which grow in the unreclaimed woods. But it is a fact familiar to the old residents of Goose creek,—and marked because it leads to a salutary observance —that ground in which cattle contract the disease may be converted into safe pastures by sowing it in blue-grass, timothy, or clover.

The third opinion, which, of all the four, is least reconcileable to the majority of unprejudiced believers, which appears most paradoxical to those who have seen their cattle die of an anomalous disorder, and their families sicken and perish from the use of their milk or flesh, has found many ingenious and able advocates. Its fallacy will be made out by the facts adduced in support of the last opinion—that it is of vegetable origin.

The cattle of one family are permitted to frequent the woods; they return home at night, apparently in health, it may be; the members of the family partake of the milk, and are soon attacked with sickness at stomach, vomiting, and other symptoms of gastric derangement, aud perhaps some individual of it perishes. The calf, meanwhile, is taken with trembling, violent thirst, and rigidity of the extremities, of which it dies. The cow, all the time, which imparted the disease may be, to all appearance in good health—an appear-

ance which severe exercise, or simply retaining her milk, shows to be delusive. In returning home some of the cattle have perhaps died at the first stream on their way after drinking copiously; whilst others, scarcely able to reach home, manifest unequivocal symptoms of disease, teaching the family to beware of their milk.

While this is going on in one family, another, living in the same neighbourhood, inhaling the same atmosphere, drinking the same water, and faring upon the same diet, but with the precaution of confining their cattle to cultivated pastures, remains healthy. This was a circumstance of every day occurrence in the early times of Goose-creek, when the inhabitants were more in the habit than at the present day, of permitting their milk-cows to wander abroad. It is a fact of perfect notoriety, that persons living in the neighbourhood where the poison prevails, may indulge in the use of milk, butter, and fresh meat, and yet remain free from disease, provided the cattle be enclosed in clover, or other grass pastures. But if they be suffered to run at will, or even if the pasture ground be enlarged by taking in more woodland, disease and death, often are the consequence. Upon again excluding the woodland, which contained the poison, and confining the cows to the soil set with grass, health may be, as in many such instances it has been, again restored. Dr. Thompson's letter to me furnishes a case directly in point. "Robert M'Neely, his wife, and four children died within a week, under circumstances which left no doubt on the minds of any, that their death was the result of using poisoned milk. He had lived a number of years at the same place, and enjoyed good health, except that he was subject to attacks of humoral asthma. Having escaped so long he became careless, and during a busy season of hay-gathering, his cattle got out, and were not attended to for several days. The first milk taken after their return from the woods produced all the mischief. The effect followed its use almost immediately. All the family died except the two youngest children—one an infant at the breast, and they were saved with difficulty."

Is it likely that any form of disease having its origin in *malaria*, would deprive the wild turkey of its wings, and the deer and fox of the use of their limbs? Homer's disease went not so far. And even if it were a febrile disease which proved so fatal to cattle, the use of their flesh would not be detrimental to carnivorous animals; as hundreds of well authenticated cases attest the flesh of poisoned cattle to be. Calves which perished from sucking the milk of the cow have imparted disease to dogs and buzzards feeding upon their flesh.

In the early settlement of Goose-creek, when the face of the country was covered with cane and pea-vine, and there was, consequently, no scarcity of food for cattle, milk-sickness was comparatively unknown. As the country became populated and provisions grew scarce, the cows being forced to be less elective in their food, it increased to an alarming extent. But in modern times, since pastures have become more common, and the inhabitants are more in the habit of confining their stock, it is again become a rare disease. Such is not the progress of marsh miasmatic disorders in this country.

In the Sequachee valley, one of the most salubrious regions in the western country, where bilious fever is almost unknown, this disease prevails, and is contracted by cattle on the sides of the mountain. When our species become its subjects, it is from partaking of the milk or flesh of poisoned animals. This is always the case. In every instance it may be traced to the use of this class of articles. Sometimes there may be obscurity and doubt, but strict inquiry will always trace it to this origin. Mrs. Jones, of Sumner county, laboured under the complaint without knowing the source whence she derived it. Upon the suggestion of Dr. Sharpe,* the cow which afforded the family milk was suffered to go unmilked, and in a few days fell sick of the complaint and died. This is a peculiar feature of this poison, that retaining the milk in the udder causes the cow to suffer with the disease, while its regular abstraction, at short intervals, has frequently the effect of procuring her escape.

* Med. Record. loc. cit.

Drunkards are said to be less liable to milk-sickness than persons not given to intemperance. This is not a feature of bilious disorders. Nor are its symptoms the same as those attendant upon the latter complaints. The tongue is often smooth and dry, or if coated at all, it is with a tough white mucus. No pain in the head, spine, or region of the liver attends it, and it runs its course much more rapidly than any bilious disease except cholera. It is not marked by the regular paroxysms incident to fever, but pursues a steady, uniform, unchecked course, either to dissolution or a favourable crisis.

Finally, experiments have been made, and facts are numerous, proving in the most direct manner, the conveyance of the disease from one animal to another by milk. Dr. Thompson furnishes me a strong case. "A farmer's cows, four in number, broke out of their enclosure, and were in the Millstone knobs about thirty-six hours. When driven home, some of the milk was drawn from them and set aside, that its appearance on standing might be observed; the calves were permitted to suck the rest; they were hungry, the udders of the cows full, and consequently their repletion was copious. One of the calves was taken sick while sucking and died in a few hours. All the others died in a day or two. Three of the cows died; one which was sucked by two calves, both of which died, recovered, after severe disease, in the course of which all her hair dropped off. The milk which was set by was given to several domestic animals, as cats and dogs—all of which died, if I am not mistaken; some I am confident did, and all were diseased."

It has been objected to this disease being of vegetable origin, that it prevails in winter when vegetation is destroyed; and that relapses are common in it, as well as in fevers; that some members of a family are diseased while others escape; and that communities fearing to eat milk and butter nevertheless send them to market, where they are used with impunity.

That it prevails rarely in winter we have already shown, and then it is in warm weather, when cattle may find many vegetables still verdant.

We know of no reason why relapses should not be incident to milk-sickness as well as to other inflammatory diseases. Gastritis and enteritis may be brought back when partially cured, by exposure, or imprudence in diet. It is one of the peculiar phenomena of our disease, that its subjects rarely perfectly recover, but remain, through life, feeble, incapable of severe exercise—trembling when fatigued, and subject to a recurrence of gastric derangement after exposure.

If some members of a family escape, while others suffer with the disease, it is because all are not alike exposed to the noxious cause.

Butter is doubtless often sent to market from the regions of country in which the disease prevails, but it is the product of cows which have been confined to safe pastures, and are without disease; for we will not believe that there exists in our country a community so dishonest as to send butter to their neighbours which they know to be poisonous. Cows generally manifest the disease so unequivocally, that there is little danger of using the milk, and if it is once used, and disease results, the cream is thrown away, and no butter is made from it. And as it respects unsound beef, the objection has no force; for it is a fact perfectly notorious, that animals labouring under the complaint, though it be in a latent condition, will not bear exercise. Horses apparently healthy while at rest in their pastures, become soon exhausted, manifest marks of disease, and often die, if put into harness, or under the saddle. Cattle feeding upon the knobs, in seeming health, have been frequently destroyed by the fatigue of walking home; and consequently, no diseased beef could be driven to a distant market.

What the cause of this truly anomolous malady is, in the present state of our knowledge, it is impossible to pronounce. We have tried to show that it is vegetable; and like the disease which it produces, in character it must be unique. Some writers have gone so far as to designate the vegetable; but upon what authority we do not know. We do not think that it has ever been discovered; nor is this strange, for it has ne-

ver been sought after by any one possessing the requisite amount of botanical knowledge.

The symptoms of the disease in the lower order of animals are languor, great thirst, constipated bowels, universal tremors, tossing of the head from side to side, great rigidity of the muscular system; a peculiar odour of the milk, laborious respiration, the breath offensive to the bystander. In man they are analogous. After the use of milk, butter, or recently slaughtered meat, in a shorter or longer time, the individual is attracted with a distressing sense of burning in the epigastrium, followed in a few days, generally in a few hours, with vomiting. The sense of the burning is often compared by the sufferer to fire. Thirst insatiable. These symptoms are uniform, pathognomic, and continue throughout the complaint. The bowels are constipated; sometimes incorrigibly so, and when this is the case, the patient falls a victim to the disease on the third, fourth, or at farthest, the fifth day. The pulse at first natural, becomes in the sequel small, tense, vibratory, and often irregular. The epigastrium becomes tender to the touch. The skin is of irregular temperature—the body being hot, and the extremities cold. The patient is distressed with a sense of burning in the palms of the hands and soles of the feet. The tongue is clammy, and covered with a white tough mucus; or is dry, red, and shining. Great prostration attends from the beginning. No regular remissions or exacerbations—no delirium, no pain in the head or back. Drinking aggravates the nausea and other gastric symptoms. A symptom much relied on by those conversant with the disease, is an odour of the patient's breath, *sui generis*, which they cannot describe.

The symptoms of the chronic form of the complaint are a slight burning in the stomach, continued and distressing; occasional vomiting; general debility; trembling upon slight exercise; difficulty of breathing after moderate exertion; rigidity of the whole system; costive bowels; giddiness of the head; countenance sallow; intellectual dulness. This form of the disease results from a small dose of the poison, or from an imperfect cure of the acute kind.

Treatment. Venesection is not so valuable a remedy as might be anticipated, from the character of the symptoms. This is possibly owing to its not being resorted to in the first stage of the disease, since patients rarely apply for medical aid until it has made considerable progress. Opportunely had recourse to, previous to the stage of collapse, which rapidly supervenes in this disease, and while the inflammatory symptoms are yet clearly marked, it is decidedly beneficial. The pulse here, as in inflammation of the stomach from other causes, must not constitute the criterion by which we are to judge of the necessity for bleeding. We must be governed more by the state of the disease, the strength of the patient, the obstinacy of the vomiting, the pain and burning in the stomach, and the tenderness of the epigastrium.

Cathartics are esteemed by the most experienced practitioners, the sheet-anchor in this disease. Calomel is to be preferred on account of its weight, as well as its active purgative qualities. It is to be given in six or eight grain doses once in four hours, and to be assisted by stimulating enemata, until free catharsis be produced. When so fortunate as to fulfil this indication, the patient may generally be considered out of danger. The bowels must be kept soluble by castor oil, or salts and senna, until complete health is restored.

Blisters to the epigastrium are never to be neglected when the bleeding and the calomel have not the effect of allaying the vomiting. Sinapisms are also a valuable remedy. When the circulation is well balanced, the extremities being warm, cold water applied to the hands and head often produces great relief, sometimes stopping the vomiting as if by a charm. We witnessed this effect lately in an ordinary case of gastritis. The patient derived the most sensible and immediate benefit from immersing his hands in water just from the spring.

It is frequently necessary to cover the abdomen with blisters. The calomel must be used with a liberal hand till the bowels are acted on; and if ptyalism supervene, it is to be considered an auspicious omen. It is necessary to prevent the patient from taking too much drink, which should consist

of cold coffee, or water off parched meal or toast-water. The preparations of opium possess no great efficacy in this complaint, aggravating in some instances, instead of allaying the nausea and vomiting. Mint-water has sometimes a good effect. Upon the whole, we would rely mainly on venesection, mercury, epispastics, and affusions of cold water upon the extremities.

The chronic form of the complaint is to be treated with calomel in minute doses, given to salivation, epispastics, castor oil, sulphur, and the alkalies. The latter class of remedies are of peculiar efficacy in this form of the disease.

The course indicated for the acute form, timeously adopted, and steadily persevered in, will generally terminate the disorder in from five to ten days; but it sometimes happens that a truce only is obtained; the patient is but partially cured, and after dragging out a miserable existence for a series of months, falls a prey at last, to the symptoms with which he was at first attacked.

Autopsical examinations have never been made on the human subject; but the symptoms of the disease in man and brutes being the same, we may infer that its ravages are likewise analogous. In post mortem examinations the stomach and first intestines of cows, have been found to bear the marks of inflammation in its various stages: they are often gangrenous and uniformly dry and hard, often as if exposed to the fire. Their contents are also dry, evidencing diminished secretion. No traces of disease have ever been observed in any other organ, except that the lungs are sometimes preternaturally engorged with blood.

ART. VII. *Case of Bronchocele successfully treated by Iodine.* By THOMAS COCK, M.D. of New-York.

IN the autumn of 1822, my attention was called to the consideration of a case of bronchocele, on account of the favourable reports by M. Coindet of Geneva, of its treatment with the preparations of iodine. These papers were put into

my hands by my friend Mr. John Griscom of this city, and some of the hydriodate of potash, then new, was also offered, provided I should wish to use it. The particulars connected with this case had almost escaped my recollection, until within a few days, when its interest was agreeably revived by a request to call and see the lady for whom I had prescribed, presenting a complete cure.

The disease was of eleven years standing when my attention was first directed to it. The left lobe of the gland was the most enlarged; it extended to the base of the lower jaw, and impeded mastication, deglutition, and occasionally respiration. The right lobe was one-third the size, and rather more dense than the left, which was uniformly soft, yielding to pressure, and having its density increased by its increasing size.

No doubt existing of its being a genuine goitre, I did not hesitate to recommend to the lady, in strong terms, to commence the use of the remedy mentioned. To her ready acquiescence and faithful perseverance in the use of the means proposed, much of the successful issue may be attributed. I first commenced with the external application of the hydriodate, in the form of an ointment, in the proportion of one drachm to the ounce. This was applied by friction, morning and evening, over the whole surface of the tumour, and was followed up for about two months, when the supply of the medicine failed. Shortly after some of the iodine was again procured, and a tincture prepared agreeably to Coindet's prescription, of which she took ten drops and increased to twelve three times a day. Such was the course of treatment pursued.

It may be remarked, that in two or three weeks from its commencement, the tumour had diminished in size one-eighth of an inch, as ascertained by actual measurement. From this period it continued to diminish gradually, and the use of the remedy was persevered in for about eighteen months, without any inconvenience.* The cure was completed, without leav-

* It was omitted for some few weeks, in consequence of an attack of remittent fever, for which her family physician prescribed, and was resumed again after her recovery.

ing a vestige of the disease, in three years and a half. It would seem that the impression made, had a uniform system of progression to its final termination. The patient's general health has been also improved, and she has less disposition to headache than formerly.

Since the above case, two others have come under treatment, both by the internal use of the iodine and the external application of the hydriodate in the form of ointment, and a favourable impression has been made on the tumours. Their further progress will be reported hereafter.

Remarks. My observations on the use of iodine are decidedly favourable. It has great effect by external application upon lymphatic tumours, and in amenorrhœa, I am disposed to think that it is a valuable remedy. In bursal enlargements I have also reason to consider that it will be efficacious.

The above considerations are submitted in full confidence that iodine is the great remedy in goitre. It makes a powerful impression upon the system, and for this reason must be used with great discretion.

ART. VIII. *An Account of the Dengue Fever, or late epidemic of the West Indies.* By RICHARD TUITE, M.D. of New-York.

FOR the substance of the following remarks on the Dengue or Dandy fever, as it manifested itself particularly in the Havana, I am indebted to two sources of information; the one, a pamphlet written by Dr. D. Jose Antonio Bernal Munos, which was kindly presented to me by Mr. Stoughton, Spanish consul of this city; the other, a short history of its symptoms and treatment from the pen of the distinguished D. Simon Vicente de Hevia of the Havana, which may be found in the Mercurio of the 26th June. From the perusal of these documents, I shall endeavour to give a short extract, which, without entering into the details of the subject, will at least exhibit the characteristic symptoms of the disease, and point out that method of treatment which has been found most successful by the generality of practitioners.

"The first notice which I received of this disease, was from a medical correspondent in the island of St. Croix, who writes me on the 25th Nov. 1827, "I can hardly hold the pen in my hand, having just recovered from a severe attack of a new fever, that made its appearance lately in St. Thomas, and is now marching through St. Croix with gigantic strides. I have no power, at present, to describe the symptoms; suffice it to say, that they comprehend most of the severest symptoms of common fever, with all the racking pains of acute rheumatism in every joint. The fever luckily does not last more than two or three days at the utmost, or it would certainly prove fatal. The whole of West-end is like one large hospital, and the physicians being nearly all attacked, there is little help to be had."

From the Virgin islands it regularly progressed westward, visiting the different islands in its course, and reached the Havana in the early part of the month of March. The disease as it manifested itself in that city, observed two distinct periods. The first, characterised by high febrile excitement and acute pain; the second, distinguished by chronic ailments and by an absence of fever. The premonitory symptoms which mark an attack of the disease are, great weight in the head, pains in the legs, and in the loins, proceeding to the arms, accompanied by general prostration of strength and mental uneasiness; the pulse is frequent and contracted: as the disease gains force, the skin becomes hot and dry, the countenance and eyes inflamed, the pain in the head increases to an acute cephalalgy, the pulse developes itself and becomes full and frequent and even hard in the more robust, with the other accompanying symptoms of inflammatory fever, which are more or less marked, according to the idiosyncrasy of the patient, or his peculiar condition when attacked by the disease. In some, the tongue was white and moist: in others, dry and inflamed: while in others again, foul in its centre, and red on its margin. In the first mentioned class, the head was rather weighty than painful; the urine clear and without deposit: in the second, the pain in the head was acute, and the eyes resisted the impression of the light, the urine high co-

loured: in the third class, although the pain and weight of the head was more supportable, it was however accompanied by vertigo and fainting; the urine was not inflamed, but turbid.

It is remarked by Dr. Hevia, that those who were labouring under the effect of chronic diseases at the time they were attacked by the Dengue, felt an increase of all the symptoms of the previous disease; but by way of compensation, sometimes found themselves happily rid of their complaints with the termination of the Dengue. It is a striking peculiarity of this fever, that there was little or no thirst during its continuance; so much so, that the physicians were obliged to force their patients to accept even of the most agreeable draughts.

The symptoms which we have described continued to increase in force, and reached their crises, within the first twenty-four hours: a perspiration then ensued, and as it flowed, the disease gradually diminished during the second twenty-four hours, so that on the third day the patient was left without fever, but still subject to those chronic ailments which marked the commencement of its second period.

In the second period, there was an absence of fever; inappetency, vitiated taste, the mouth bitter, the head light and subject to vertigo in the more debilitated; muscular prostration, pains in the joints, nervous contractions, swellings of the extremities, infarction of the lymphatic glands of the neck, axilla, and groin. Thus we see that the disease evidently commences its attack on the nervous and muscular systems; the sanguineous system then becomes sympathetically affected, producing fever and its attending symptoms, and if the disease does not terminate by abundant perspiration or a copious flow of urine, the symptoms of the second period then supervene. It is classed by Dr. Bernal Muños among the *mucous* or *lymphatic* fevers of the ancients, or the Adeno-miengeal fevers of the moderns.

As to its diagnosis, it is remarked by the same gentleman, that the appearance which the Dengue first assumed, was so similar to that of the yellow fever, that had he not been aware

of the fact, that those who laboured under it were natives or acclimated, he himself could not have distinguished the two diseases. Its prognosis is very favourable. Out of 2500 men who were treated for this disease in the military hospitals of the Havana, not one died. It has, however, in some cases left very distressing chronic complaints in the subjects of its attack, and which have persisted for many months.

Dr. Bernal Muños enters into the investigation of the causes of this disease with much sagacity and spirit, and in opposition to the skeptic who doubts when he wills, affirms that there are well ascertained facts in medicine, and that there are principles sufficiently well confirmed, both by observation and experiment, to supply the just and reasonable scrutiny of the candid investigator of truth. The days are now past when the physician, poor in knowledge as he was rich in conjecture, wandered beyond the rational limits of investigation to discover in the supposed acrimony, acidity, fermentation, or dissolution of the humours, the causes of those diseases which, thanks to the advancement of a more rational physiology, we are now enabled to trace to the effects of those agents with which we stand in immediate relation.

It is in a dry and heated atmosphere, in the exhalations and dust of the earth, mental agitation, active bodily exercise, continued for some time; in the impressions of cold, and in the freshness of the breezes which prevailed every night at that period, that he discovers the remote or occasional causes of the disease. Its proximate cause is a dry and rough skin, whose stricture, by suppressing the perspiration, propels the fluids to the cavities and central organs. And it may be remarked, that to the unequal and morbid play between the functions of the skin, and of the internal mucous membranes, may be attributed the greater proportion of the diseases of warm climates.

From the method of treatment may be derived a strong confirmation of the truth of these remarks; where it may be observed, that a greater proportion of the sick were cured by observing diet, using partial baths of the feet and arms, sinapisms, laxatives, glysters, and diluents, without the administration of

any medicine. Topical bleeding was seldom found necessary — general bleeding never; on the contrary, its effects were always prejudicial, if not fatal. The reader would perhaps be astonished were I to assert, that with a treatment equally mild, a great proportion of those labouring under the yellow fever might be cured, and that with the exception of leeching, which I found extremely beneficial in this disease, I was never in the habit of using more active remedies than those here prescribed for the first period of the Dengue, and that with success.

But what will they say, who have advocated the necessity of general bleeding, the administration of repeated purgatives and diaphoretics, the use of mercurials administered both internally as well as externally, with the view of producing ptyalism, and such like stimulants?—they may perhaps smile; but my assertion still remains good, and its truth has been sufficiently confirmed within the last three years by the ample experience of the most enlightened practitioners of the Havana. Under their hands the yellow fever has become a disease comparatively tractable, and no longer looked upon as almost necessarily fatal. And be it said to the honour of the founder of the physiological doctrine of medicine, that this amelioration in the treatment of this disease, is in a great measure to be attributed to the sounder and juster views of the animal economy which this doctrine has inspired.

But to return to the Dengue: the treatment in the second period of the disease, consists in oily and opiate frictions, applied to the painful parts, rendered more or less stimulant; anodyne cataplasms, fomentations, and lotions of the same class, and emollients; slight doses of magnesia when the tongue was foul, or the mouth bitter; slight bitters when the tongue was clean, and the patient without appetite; warm clothing; general baths and emollients when the pains were acute and the rigidity of the limbs considerable; alkaline and resolving unctions when the pains were dull and the swellings of the articulations œdematous; salt baths when the patient was debilitated and his limbs swollen; slight diaphoretics and mild sudorifics opportunely administered. Such were the remedies

which were prescribed in this period of the disease, according to the particular circumstances of the patient.

I cannot conclude this slight and partial account of the Dengue without paying a just and merited tribute of respect to the distinguished merit of the excellent professors of medicine whose writings have furnished the materials of these observations; nor can I too much admire the virtue and wisdom of the medical gentlemen of the Havana, who like good watchmen, faithful guardians of the public health, on the approach of this epidemic, assembled a council of their brethren to deliberate on the best means of obviating its ravages, and of divesting it of its terrors.

ART. IX. *An Account of the origin of the Law, "to incorporate Medical Societies for the purpose of regulating the Practice of Physic and Surgery in this State;" passed 4th April*, 1806.* By JOHN STEARNS, M.D. of New-York.

THE influence which Medical Societies have had upon the profession, and the general misapprehension of their origin, impart to this topic an interest which I trust will not be deemed inappropriate. This interest is enhanced by the consideration, that the time will soon elapse when those who were concerned in originating this law will have passed the confines of time, without having left a single record of the fact, by which the numerous errors which have obtained publicity in our scientific journals might be corrected, and justice rendered to whom it is due.

From these publications, I shall select the following paragraph from a biographical notice of Dr. Bruce, in the first

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* With much pleasure we publish this, we believe, only authentic account of the origin of our Medical Societies. It deserves to be recorded as the commencement of a system which has done more than any thing else to elevate the character and general respectability of the medical profession of this State.—ED.

volume of Silliman's Journal of Science—" Previous to the year 1805, the practice of physic in the state of New-York was regulated by no public authority, and of course, was not in the happiest condition to promote the respectability and usefulness of the profession. To remove as far as possible the existing circumstances, Dr. Bruce became an active agent, and in conjunction with Dr. Romayne and other medical gentlemen of New-York, succeeded in establishing the state and county medical societies, under the sanction of the legislature. This act may be considered among the first efforts made in this country to reduce medicine to a regular science, by investing the privileges of medical men in the body of the members of the profession."—The President of the New-York county medical society, in his inaugural address for 1824, also states, " that this is the parent society, from which the other institutions of a similar character throughout the state have emanated."

Without multiplying similar quotations to evince the error of public opinion, I take this occasion explicitly to state, that neither Dr. Bruce nor Dr. Romayne, nor this " medical society," nor any physician then resident in the city of New-York, had any knowledge of the preliminary measures which led to the formation of this law, or the most remote agency in procuring its passage through the legislature. These measures were commenced exclusively in the county of Saratoga, with a view to reclaim the profession from that degradation and contempt to which it had been reduced by ignorance, professional broils, and the grossest empiricism.

Those who witnessed the original and progressive settlement of the northern and western sections of this state since the year 1790, will recognise the mania that infatuated the emigrants from the east, and the ambitious projects formed by those who assumed the title of doctor. Many who had never read a volume in medicine, were suddenly introduced to an extensive practice and to a reputation of such imposing authority, as to control the opinions of their superiors in science, and to prescribe rules of practice for their government. Consultations were generally distinguished for gross contro-

versies at the bed-side of the patient, whose health and life were often immolated to the ignorance, prejudices, or discordant theories of the contending physicians. Their skill was generally graduated by their ability to magnify the cures they had made. Gratifying indeed would it be, at this enlightened period, to be able to bear testimony to the total extinction of this relic of quackery, and to the abolition of that still more ridiculous and growing imposture, that indignity of our profession, which by the sign of a common vender, converts the medical office, designed for the cure of all diseases, into a private infirmary for curing those only which belong to a particular organ. But so great has been the change in public opinion, that empirics now seldom boast of their intuitive knowledge, their magic incantations, or their initiation into the mysteries of Indian practice; but are compelled to assume the appearance of learning, and to affix to their names the fictitious appendage of M.D.—a proof that scientific physicians will always be patronized as the public mind becomes enlightened. The ignorance of the practitioners had so obscured the science of medicine at the period referred to, that reflecting physicians united in the necessity of adopting vigorous measures for a radical reform.

In 1796 a series of numbers were accordingly published in the newspapers of Saratoga, which directed the attention of the profession to the subject of instituting medical societies, and ultimately led to the formation of a society in that county, consisting of twenty-one physicians. But so discordant were its materials, and so incompetent to sustain the character of a scientific institution, that the year of its formation became the period of its dissolution. This want of success did not prevent the renewal of future efforts.

In November 1805, another meeting was held, at which committees were appointed, and a resolution passed to invite the co-operation of the physicians of the adjoining counties of Washington and Montgomery. The following is a copy of the printed circular issued on that occasion.

"*Ballston, November* 7, 1805.

"SIR,—At a meeting of physicians of the county of Saratoga, convened this day at the court-house in Ballston, for the purpose of devising means to improve the practice of medicine, we were appointed a committee to impart the object and wishes of that meeting to our professional brethren in the counties of Washington and Montgomery. In that capacity, we beg leave to recommend to your earnest attention the necessity of adopting some vigorous measures for the suppression of empiricism, and the encouragement of regular practitioners. The evil calls loudly for the united efforts of all who sincerely wish to remove from that valuable science, the imputation of quackery; under which, from the ignorance of some of its professors, it not unjustly labours. The wish of the meeting is, to procure from the legislature of the state their sanction to a medical society; and we request your attendance at the court-house in Ballston, on the 16th of January 1806, at ten o'clock, A. M. either in person or by a committee of your county, for the purpose of adopting the best means for obtaining an act of incorporation.

"We remain, &c.

"WM. PATRICK,
JOHN STEARNS,
GRANT POWELL,
Committee of Correspondence."

Pursuant to the notice in this circular, a delegation from these counties attended the adjourned meeting at the same place, on the 16th of January 1806. A memorial to the legislature was then reported, adopted, and signed, and a committee of three, consisting of Dr. Asa Fitch of Washington, Dr. John Stearns of Saratoga, and Dr. Alexander Sheldon of Montgomery, were appointed to carry the same into effect.

The committee from Saratoga and Montgomery attended the ensuing session of the legislature, and fortunately for the cause of science, the latter gentleman, Dr. Alexander Sheldon, was elected speaker of the house. Although the meeting at Saratoga did not contemplate the extension of the law beyond the limits of these three counties, the committee assumed the

responsibility of making it general, and of extending its privileges to every county in the state.

Accompanied with this explanatory view of the subject, they presented the memorial to the house of assembly on the 25th of February 1806, who referred it to a committee, consisting of William Livingston and Isaac Sargeant of Washington, Gurdon Huntington of Otsego, John Ely of Green, and Joel Frost of West Chester. The majority of this committee being medical men, favourably received the proposed plan for a general law to extend the act of incorporation through the state, which they finally matured and reported to the house. The powerful opposition to this bill threatened its early and prompt rejection by a large majority. The speaker, the committee, and several other members gave it a very able and vigorous support. But notwithstanding all the exertions and political influence of its friends, the danger to which the tranquillity of the state would be exposed by the incorporation of forty distinct associations of physicians, was so magnified by the opposition, and the impression thereby made upon the house was so great, that but feeble hopes were entertained of its success.

At this critical juncture, when a decisive vote against the bill was every moment expected to be taken, the late honourable William W. Van Ness rose its most eloquent and powerful advocate. And perhaps the pre-eminent powers of his parliamentary eloquence were never exerted with better effect. He refuted the arguments of the opposition, portrayed the benefits to the profession and to the public in such glowing colours, and with so much energy and zeal, that the opposition became feeble, the friends to the bill increased, and from that moment the successful issue was rendered certain. To his memory do the profession owe a monument of marble, with their gratitude deeply engraven upon its tablet.

On the first Tuesday of July 1806, three months after the passage of the law, about twenty societies were organised pursuant to its provisions, and within two years scarcely a county in the state, of any considerable population, was without a duly organised medical society.

REVIEW.

ART. I. *A Compendious System of Midwifery, chiefly designed to facilitate the inquiries of those who may be pursuing this branch of study. Illustrated by occasional Cases, with many engravings. 3d edition, with additions and additional plates.* By WILLIAM P. DEWEES, M.D. Adjunct Professor of Midwifery in the University of Pennsylvania ; member of the American Philosophical Society, &c. 8vo. pp. 644. Philadelphia, 1828.

THE popularity of this work is evinced by its arriving at a third edition in four years. In a former volume we mentioned its first appearance, and ventured to express that opinion of its merits, which has been sanctioned by the public. The present publication is improved in many respects, and we particularly notice it at this time, for the copious observations it contains on those points of medical jurisprudence which relate to Midwifery. The introduction of this subject in a broad and prominent manner in an elementary work, is thus defended by Professor Dewees:

"In treating of subjects which have a relation to medical jurisprudence, it may be thought by some, I have rather wandered from the strict path which my professed objects point out. But in this I do not agree. First, because I do not meddle with any subject of a medico-legal kind that has not an intimate, and perhaps an entire connexion, with midwifery. Second, because on the intimate knowledge of this branch, some of the most important testimony almost exclusively depends. Third, some of the most frequent, as well as interesting objects of medical jurisprudence, as infanticide, supposed pregnancy, supposed delivery, rape, &c. are dependent almost altogether upon the evidence of the accoucheur. Fifth, because there are points in each of the cases above mentioned, which can only be eluci-

dated by the experienced practitioner in midwifery. Sixthly, because there is much ignorance as well as discrepancy betrayed in the testimony of physicians who may practise, (and even extensively this branch) when called into a court of justice, from the want of knowledge of the subjects at which we have glanced, rather than professedly treated." p. 98.

Omitting an analysis of those chapters which were formerly noticed, we propose confining ourselves to such as particularly refer to the science in question.

Chap. VII. *On the Developement of the Fœtus.*—The summary given by Dr. Beck in his Elements of Medical Jurisprudence, as to the gradual increase of the fœtus,—and its weight and length at the full time, is extracted by Dr. Dewees. He corroborates the opinion of Dr. Willoughby and others in this country, that the average weight of children born in the United States exceeds seven pounds.

The observations made in Great Britain would lead us to believe, that it is comparatively rare in that country, to meet with children weighing more than twelve pounds. Our author remarks,

"In this country, as far as our experience goes, it is not unfrequently met with, if comparisons by the eye do not greatly deceive us. I delivered one woman of three children (at three different births and males,) all of which appeared of the same size at birth; and from the very large size of the one I first delivered her of, I prevailed upon the parents to permit me to weigh it—it weighed, without clothing, fifteen pounds and a half—the two others were not weighed—but appeared to be of equal bulk. I have met with two ascertained cases of fifteen pounds, and several I believed to be of equal weight."

The variety that occurs both in length and weight, as well as other marks of developement, is ascribed by our author, to a variety of contingencies in the progress of the fœtus from the germinal to the fully expanded state. As a result from this, the laws of developement may be imperfectly, or irregularly—too slowly or too rapidly performed. If the former—the fœtus may be defective in some parts, or natural or excessive in other portions of its body. If the latter—that

is, too slowly or too rapidly, it will exhibit either marks of immaturity or excessive though perfect size of all its members. The application of this distinction, in medico-legal cases, is deemed by our author of great importance.

"It is of great consequence sometimes to decide, between *immaturity* of developement and the *imperfection* of developement of the fœtus; the first has relation to the time it may have tarried in the uterus, while the second is dependent upon the manner in which developement has proceeded or been performed." Page 91.

Difficulties may also arise in cases where the developement is performed too rapidly or excessively.

The following cases are given as illustrative of the above distinctions.

"In November 1810, I was called to attend a female in labour with her first child. The woman had been very suddenly attacked with severe pains, in consequence as was supposed of great agitation of mind. On examination, I found the uterus was not completely developed; as a portion of the neck was still to be felt. I inquired of the patient, whether she thought herself at her full period; she answered, no: she was but seven months gone. After several hours severe suffering, she was delivered of a large boy; at least large for seven months. I however made no observations upon the case at the moment, as I was an entire stranger to the circumstances of my patient; though its size was remarked upon by an old woman, mother of the husband, who said, it was the finest seven months child she had ever seen. It is certain the child bore every mark of greater maturity than is usual with children born at the seventh month of utero-gestation.

"Some months after this period, I was called upon and examined before a magistrate and two lawyers, as a preliminary step to a suit for divorce, which it was intended should be sued for by the husband of my patient, if certain opinions derived from me, were favourable to such an undertaking.

"The following circumstances were alleged on the part of the intended prosecution before the magistrate and two lawyers; 1st. That at the period of the birth of the child, but seven months had elapsed since the marriage of the parties. 2d. And at the time of the marriage, the husband had been from sea but two days, and this after an absence of some months. 3d. That at the end of seven months, the wife was delivered of a full grown child. It was therefore declared, that the wife was pregnant before marriage; and that not by her husband; a bill of divorce was therefore intended to be prayed for.

"On the part of the wife, it was proved she had sustained an irreproachable character; that she was an industrious domestic woman; not visited or known to associate with any man in particular; that she had during the whole time lived with the mother of her husband, and that she had had her menstrual period but a few days before her marriage, and that she had not had them since her marriage.

"My evidence went to say, that at the period of labour the neck of the uterus was developed more than was usual at the seventh month, but was not effaced; which gave rise on my part to the question as above stated, whether the patient thought herself at her full term, and which drew from her the answer, that "she was but seven months advanced in her pregnancy;" and that my opinion and belief was, that she was not in error as regarded her calculation; though the child was very considerably larger than is usual at the seventh month. That violent mental excitement was very frequently a cause of abortion and of premature delivery; and it had been proved, that this woman had experienced great mental anxiety, as well as felt great anger the day previous to her feeling any thing like the pains of labour; and that this mental agitation might have occasioned the premature delivery.

"That the developement of the fœtus is by no means regular; that it is notorious, that some women bear much larger children than others; that the average weight of a newly-born child is fixed in this country, at between seven and eight pounds; now it must be evident from an average being taken, that there must necessarily be many children whose weight must exceed the stipulated weight or average, and many others fall beneath it. And though it was my belief that the weight of the child in question, was nearly equal to the average proportion, but that this in itself did not by any means prove it had arrived at full time; as all such children whose respective weights may exceed the average, and particularly those who may weigh from twelve to fifteen pounds at birth, (a thing not very unusual) must necessarily have weighed more than the average at seven months; and consequently, the weight of the child cannot mark the period of gestation with so much precision as to render it free from all error.

"That the fact just stated, must strike every body as an irresistible truth; and consequently, that this might have happened in the case in question; or in other words, as it is indisputable that many children at birth exceed the average weight; it must follow, that the lesser weight must be attained before the greater; and that in cases of excessively large children, six or seven pounds would not be an extravagant weight for a child at seven months, that would weigh nearly double, if carried to the full period of utero-gestation; and that there could be no possible reason assigned, why this might not have happened in the case in question.

The husband was so entirely satisfied of this possibility, that he abandoned all farther intention of a prosecution." pp. 95, 96, 97.

On the other hand, it now and then occurs, that the increase of the fœtus has not kept pace with the period of utero-gestation. The following instance, says Dr. D. fell under his own observation, and he adds, " there could have been no possible error in the calculation, if any reliance can be put upon human asseveration."

" Mrs. —— was taken in labour at the end of the seventh month of gestation, and was speedily delivered of a fœtus of about five inches in length,—and which would probably have weighed three ounces. It breathed very imperfectly a few minutes, and then died. Upon my declaring to my patient, that she had made a great mistake in her calculation, as the child at farthest could not be more than five months, she said that it was impossible from circumstances that any error could exist, and that she was every way certain, it must be full seven months. Presuming what might be the circumstances alluded to, I inquired of the husband, whether my conjecture relative to them (namely, that no intercourse had taken place for that length of time) was correct; he assured me they were, as the health of his wife had so rapidly declined at that time, as to prevent any union from taking place.

" Again, we are intimately acquainted with a lady (whom we have delivered of nine children, at full term) who never has produced a child that would have weighed at birth, five pounds. Yet this lady enjoyed an uninterrupted state of health, made an excellent nurse, and at the end of a year, her children were as large and as healthy as children usually are at this period. This lady was subject to no disease during gestation—she was even exempt from both nausea and vomiting." Page 98.

The uncertainty which obviously follows from the opinions and cases of Dr. Dewees renders a closer examination of the subject necessary on the part of the medical-jurist. We apprehend that in contested cases, no special reliance is placed on the length and weight, although these of course require to be noticed. There are other data, founded on a surer basis, to guide and enlighten the inquirer. It may be useful to some of our readers briefly to notice these—at least such as are not yet included in the systematic works on Medical Jurisprudence. But before doing this, we may state additional results obtained in some foreign hospitals, concerning the length and weight of the fœtus at the full time. We collect them from various journals and systematic works.

In the Lying-in-Hospital at Florence, 500 women were delivered during eight years (from 1816 to 1824). The births were 506 in number. The heaviest infant weighed sixteen pounds (the Tuscan weight of twelve ounces) four ounces. The smallest born at the full period, five pounds—the majority weighed about ten pounds. The greatest length was 20 inches, the least 15, and the average length from 17 to 18 inches.*

In the Obstetrical Institution of Paria, during the scholastic year of 1820–1, there were 48 births. The greatest length was 21 inches, 3 lines ; the least 15 inches, 9 lines. The greatest weight 12 pounds, and the least 7 pounds. During the year 1823–4, there were 68 births. The greatest weight was 14 pounds, six ounces; the least five pounds. The greatest length was 21 inches ; the least 15½ inches †

The results obtained by Chaussier in his extensive researches, and also those procured from the *Hospital de la Maternité* at Paris, show that the average weight of the fœtus at the full time, is about 6½ pounds. The extremes vary from 3 pounds to 10½ pounds. The mean length deduced in a similar manner, is 18 inches ; while the extremes vary from 13 to 23 inches.‡

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* Anderson's Quarterly Journal of the Medical Sciences, vol. ii. p. 101.

† Quarterly J. of Foreign Medicine, vol. v. 330, and Anderson's Journal, vol. ii. page 100.

‡ Lecieux. Considerations sur l'Infanticide, p. 9, 12. Dr. Dewees mentions that he once delivered a child which measured twenty-seven inches in length. We observe that our author (page 93) doubts the correctness of the length and weight given by Dr. Beck for a fœtus at five months. He considers it excessive, and states that according to Dr. Hamilton's and his own frequent observation, " it measures not more than from six to seven inches, and weighs but a few ounces." We of course place full credence in the correctness of this statement—all we wish to show is, that the general average (for it must necessarily be only such) is conformable to the experience of European observers. We will only adduce two authorities in addition to those given in the work referred to. Orfila in his *Lecons de Medécine Légale*, (vol. i. p. 47) says, " A cinq mois la longueur du fœtus est de neuf à dix pouces; son poids d'enirron une

Among the positive marks of maturity or immaturity, we should place the greatest reliance on the one pointed out by Chaussier. If in a well proportioned adult (he observes) a line be drawn from the top of the head to the heel, its centre corresponds with the upper edge of the pubis. But in the fœtus, this point is situated much higher; for in a ripe child, it corresponds with the umbilicus, or a little above it—at the end of the eighth month, it is two or three centimetres higher (about an inch)—at the end of the seventh month, it is still nearer the sternum, and at the end of the sixth month, it falls just on the edge of the bone.

To this, the proportionate length of the various parts of the child—the state of the skin and its appendages—the presence or absence of the membrana pupillaris, although doubts have been thrown on this last as a proof of immaturity by the late observations of Dr. Jacob, and the proportions between the spine and the skeleton, as observed by M. Beclard must be added.

All these, it will be seen, may be investigated on the living fœtus. If death however should have occurred, additional examinations may be made. The earlier periods of conception have been minutely investigated by Dr. Pockels of Brunswick, in his "Contributions to the history of the developement of the human embryo in the first three weeks after conception."* The Wennels have noticed the increase of the brain and the proportion, at various periods, between

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livre." Lecieux (page 12) remarks, that from a great number of observations made at the Hospital de la Maternité at Paris, the ordinary length of the fœtus at the fifth month is estimated at nine and a half inches. Dr. Gordon (article "*Anatomy*" in the Supplement to the Encyclop. Brittanica) mentions a fœtus which, at the end of the fifth month, measured ten inches. He however quotes Mr. Burns of Glasgow, as saying that in the fifth month, it is only about six or seven inches long. The length mentioned in the "Elements of M. J." is from seven to nine inches, and the weight nine or ten ounces.

* A notice of this work may be found in the Medico-Chirurgical Review, vol. viii. p. 575.

the cerebrum and cerebellum.* While Tiedemann and Serres have particularly examined the developement of the various portions of the brain.† Lastly, the researches of Beclard as to the progress of ossification in the vertebræ, complete the catalogue of anatomical proofs, to which reference may be had for the solution of doubts. That they are infallible, need not be urged. They are results deduced from numerous investigations. Their validity remains unimpeached, until overturned by an equal number of opposing facts.

Chap. X. *Of the term of Utero Gestation.*—On this, Dr. Dewees professes a change of opinion : "We were at one period opposed to the doctrine of protracted gestation, for we had adopted that of the immutable nature of this operation, as regarded duration. But the case already referred to, convinced us that the period of nine calendar months could certainly be exceeded by thirteen days. This led us to a more careful investigation of the subject, and this has resulted in the entire belief, that the commonly fixed period may be extended from thirteen days to six weeks, under the influence of certain cases or peculiarities of constitution." p. 138.

The case to which our author refers is the following. The husband of a lady, who was obliged to absent himself many months, in consequence of the embarassment of his affairs, returned one night clandestinely ; his visit being only known to his wife, her mother, and myself. The consequence of this visit was, the impregnation of his wife. The lady was at this time within a week of her menstrual period, and as this did not fail to take place, she was led to hope that she had not suffered by the visit of her husband. But her catamenia not appearing at the next period, gave rise to a fear she had not escaped, and the birth of a child, nine months and thirteen days from the night of this clandestine visit, proved her apprehension to be well grounded.

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* See Lawrence's Lectures. *English edit.* p. 170.

† Edinburgh Med. and Surg. Journal, vol. xxiii. p. 81.

"I have had every evidence (he adds) this side of absolute proof, that gestation has been prolonged ten calendar months, as an habitual arrangement in at least four females, that is, each of these women went one month longer than the calculations made, from an allowance of ten or twelve days after the cessation of the last menstrual period, and from the quickening, which was fixed at four months."

"Besides, a case within a short period has occurred in this city, where the lady was not delivered for full ten months after the departure of her husband for Europe. Yet so well and so justly too did this lady stand in public estimation, that there did not attach the slightest suspicion of a sinister cause." p. 130.

Such are the proofs that have come under Dr. Dewees own notice, in favour of protracted gestation. The term of utero-gestation in the first case may have been 286 days—not 41 weeks, and of the four next, 43½ weeks.

It is not our intention to enter into a lengthened discussion on this much-contested subject. It will be observed, that the experience of our author coincides with that of Dr Samuel Merriman, as given in a former number (p. 304 of the present volume.) The latter, indeed, mentions cases where, in his opinion, gestation was protracted to the 309th day (44 weeks.) So also did Drs. Hopkins and Porrer, in their testimony on the Gardiner Peerage Case. We beg our readers to remark, that this is the extreme which practitioners in extensive practice in this country and Europe, state from *their personal experience.**

Dr. Dewees candidly allows, that as there is no certain mark to detect the instant when conception takes place, so we cannot ascertain, with absolute precision, the exact quantity of time

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* Dr. Merriman, however, mentions a case of 323 days from the day of catamenial intermission, but he does not rely on it as a satisfactory example. His third instance of suppressed menses in April 1823, and delivery in September 1824, will hardly be urged in this discussion. We must, in passing, remind our readers that all Dr. Merriman's calculations commence from the day succeeding the last catamenial discharge.

that the fœtus remains in utero. The cessation of the menses and quickening—though the most common evidences to calculate from, are necessarily subject to variation. Conception may occur at any time during the interval, while quickening happens at various periods of gestation. He concludes with justice, that in most cases a latitude of two or three weeks must be permitted.

Had our author rested here, we might have contented ourselves with the above statement, and left his facts to have the consideration they undoubtedly deserve. But with somewhat of the ardour of a convert, he proceeds farther. After censuring Dr. Beck, for his levity and incredulity on this subject; he quotes several cases from his work, and in particular, refers to that of Bartholin. The facts are simply the following. A girl complained that she had been seduced by a rich young man. She was confined and strictly watched in a *maison du force*, by order of the magistrate, and at the end of sixteen months, she was delivered of a boy. This brief narrative is quoted from Foderè, and of it Dr. Dewees remarks, that it is "*particularly in point, and well worthy of consideration.*" We too think it worthy of consideration; but as we have not been able to examine the original author—Bartholin—and above all, as we are not satisfied that the guard was incorruptible, we place it among the "*medical facts*," which Dr. Cullen once characterized.

Two quoted cases are dwelt upon at large by our author as confirming and illustrating the doctrine of protracted gestation to an indefinite limit. They deserve analysis.

A woman aged 27 years, greatly emaciated and weak, had all the symptoms of pregnancy, in October 1820. About the middle of the fifth month, she began to feel the motions of the child, and at the end of the ninth felt the precursory pains of labour. A surgeon who was called, found the pains weak, and the os uteri not much dilated, though sufficiently so to allow him to feel that the vertex presented. In consequence of the extreme weakness of the patient, she was treated with permanent and diffusible stimuli, and with so much ad-

vantage, that at the end of six weeks, she had regained the appearance of health, and had ret rned to her ordinary occupations.

A few days after the coming on of the pains, the motions of the child became weaker and eventually ceased. The size of the abdomen diminished, and the child appeared turned to the left side. *The menses appeared in the tenth month, and returned regularly afterwards.* In December 1821, Mr. Penker was called in consultation and advised forcible delivery, which was not consented to. In October 1822, he found the os uteri above the symphysis pubis, inclined obliquely half an inch to the right side, with the fundus to the left. The posterior surface of the uterus had descended so low in the pelvis, as not to be more than an inch and a half from the orifice of the vagina, and was not thicker than a double sheet of paper. The back and feet of the child could be felt through the abdomen. Such was the state of the patient in March 1823, up to which time she refused to submit to any operation. The narrator of this case promises the sequel at some future period.

The other instance is quoted from the 14th volume of the *New-England Journal.* A female, aged 29 years, became pregnant about the 1st of April, 1822. She was much afflicted during gestation, with spasms of the stomach and vomiting. She quickened at about the fourth month. After this, her spasms were less severe, but pains in the hips, loins, and back supervened. About two weeks before the expected period of labour, she was attacked with its usual symptoms. These continued for ten hours and then subsided, and from that time no motion of the child was felt. On the first of March, 1823, she was attacked with phlegmasia dolens in one limb. The disease having left this, soon seized upon the other. During the first and second week of this attack, she had a discharge from the vagina, resembling the catamenia. At times this was fœtid, the os uteri was closed, and no portion of the child could be felt. She gradually recovered, and the tumefaction of the abdomen somewhat subsided. In June, she had the catamenia—further subsidence of the abdomen.

About two weeks after the supposed death of the child, milk was secreted and continued in small quantities until October. She remained in her usal state until April, 1824, when she was attacked with pain, vomiting, cough, &c. which continued until her death on the 24th of May.

On opening the abdomen, the uterus was discovered to be much thickened, and presented the appearance of having been inflamed and to have suppurated. It adhered closely to all the surrounding parts and organs. Anteriorly it was united intimately with the peritoneum, and in this way with the abdominal parietes. An incision was made through the anterior face of the uterus, and a full grown fœtus was discovered.

These cases are deemed by our author identical—and he considers the first as unquestionably a case of uterine gestation. They prove, he observes, that the uterus may remain quiescent for a long period after the termination of the ninth month. Allowing the correctness of these deductions, what is their amount? *That the uterus may become diseased, and thus prevent the expulsion of the fœtus.* So too, cases have occurred of sickness and death of the mother at and subsequent to the full period, and the child remained unborn. But neither of these apply to the question before us—namely, the time at which in the state of the *ordinary health of pregnant women*, labour takes place. Certainly a state of disease, so marked as in the last case, proving high inflammation and suppuration to have been present, must have impaired the ordinary functions of the uterus. Can it be correct reasoning to apply the result of these instances to a process which is ordinarily performed under circumstances of general health?

Medical jurists are principally interested with reference to the subject of protracted gestation, in bringing it down to its smallest possible limits—provided any limits at all exist. We take it for granted that they do, and we had hoped that those given by its advocates on the Gardiner Peerage cause, were sufficient for explaining the most extraordinary cases that occur in the present age. Eleven Calendar Months will not,indeed,include the twelve months—the fourteen months, or

the sixteen months' cases of the 15th, 16th, and 17th centuries in continental Europe, but they would have sufficed to make Henry Fenton Jadis the heir of the title and estates of the insulted and outraged Lord Gardiner.

Chap. XLII. *Uncertainty of the Child's Death.*—On this point Dr. Dewees is extremely brief, and appears to consider all the signs enumerated as very uncertain proofs of death. There are several cases in which it may be very necessary to understand them, and decide accordingly. To aid in promoting information, we give the view of Dr. Blundell, one of the most eminent lecturers on Midwifery in London. They are taken from one of his lectures as reported in No. 245 of the Lancet.

"When instruments become necessary, the perforator more especially, it is always desirable to know whether the fœtus be or not alive, and we will therefore proceed to remark a little on the diagnostics by which this point is decided.

"You will sometimes find in labours, that the cuticle is coming away from the head in large flakes, an occurrence, however, by no means frequent, or if frequent, not, I think, often observed. Now, if you perceive the cuticle separating from the scalp in the same manner as it desquamates from dead bodies in the dissecting room, you may always suspect that the fœtal vitality is extinct. Though the desquamation of the cuticle, however, is a strong presumptive argument in affirmation of the death of the fœtus, it certainly is not demonstrative; for cases have been related, and, among the rest, one by Dr. Orme, in which the cuticle has separated in consequence of cutaneous disease, the children being alive notwithstanding; so rare, however, are these cases, that I should feel disposed in practice to look on them as of no account, were it not that human life is at stake. Again, when the child is dead, I find in general that this may, after a time, be ascertained by the dislocation of the bones of the cranium, and their complete detachment from each other, so that the cranial contexture seems to be thoroughly broken up. In cases of this kind, you feel all the bones at liberty, and floating, as it were, in the mollified brain. Hunter used to compare the head in this condition to a bag of shells. Mere mobility of the bones without displacement, and solution of union, is no proof whatever of death. Children on this evidence declared to be still, have, to my knowledge, begun to cry lustily immediately on entering the world. I repeat it, therefore, to demonstrate death, the bones must be detached and afloat.

"By laborious and other labours, it sometimes happens, that the umbilical chord lies within reach of the fingers, descending along with the abdomen in the crural presentation, and in presentations of the vertex, occasionally hanging down with the head. Well, in these cases, when the chord descends, if its pulsations are distinguishable, we may certainly infer that the fœtus is alive, for this pulsation arises from the beat of the heart; but if the chord be cold, and brown, and flaccid, and destitute of pulsation, you may then, I think, be satisfied that the fœtal life is extinct. Remember at the same time, that where the chord comes down, a temporary suspension of the pulsation for a few minutes may arise from syncope, and that such temporary suspension is no certain proof of death; no certain proof of that complete extinction of vitality, which renders rescuscitation by the tracheal pipe or warm bath hopeless. By the condition of the chord, death is demonstrated in those cases only in which this part is found to be soft, and cold, and brown, or for half an hour or an hour together, totally destitute of pulsation. These, then, are the three principal evidences on which I rely, in endeavouring to ascertain the decease of the fœtus—a desquamation of the cuticle, a complete solution of the connexion between the cranial bones, and for 30 or 40 minutes together, a total cessation of pulsation in the umbilical chord; and of the three indications enumerated, to me it appears that the second will, in practice, be found of greatest value, I mean the total disruption of the osseous structure of the cranium.

"Of the death of the fœtus, there are, too, other signs which must not be passed without notice, although on them but little reliance can be placed. By your patient, you may sometimes be told that the fœtus must be dead; for, "I have not felt it for a day or two." Now, be it remembered always, that the child may not be felt for hours, or days, or even for weeks together, and yet, nevertheless, it may be vigorously alive when born; certainly, so far alive as to be recuscitated by the tracheal pipe or warm bath. Do not be deceived, therefore, into a notion that the fœtus is dead, merely because it has not been felt spurning or cuffing the uterus. By some it might be supposed that the child is dead, in those cases in which you cannot feel the pulsation in the fontanel. This might be made a very pretty subject for obstetric disputation; but when you are become more experienced in practice, you will not, I think, feel inclined to give much attention to this sign. If a child be prone to hydrocephalic, or affections of the convulsive kind, the pulsations of the fontanels may sometimes after birth be felt more distinctly than the beat of the radial artery; but in health, even in vigorous children, the cerebral pulsation may not be clearly distinguished, and how can we then, in prudence, venture to infer the death of the fœtus, merely because the pulsation is indistinguishable at a time when the head is lying at the brim of the pelvis. Again: a strong proof of death is taken from the issue of a fetid discharge from the uterus, and yet you ought not to consider this sign as decisive, for these discharges are now and then observed, when the child is alive. Nor is it a certain proof that the child is dead, when under the vertex presentation, you find the me-

conium is making its escape, the discharge being detected by the stain which it imparts to the fingers; for although this discharge, in many cases, arises from death and paralysis of the sphincter, yet in two vertical presentations, I have observed a discharge of the meconium, though the fœtus was vigorously alive.

"If the scalp is *emphysematous*, or the abdomen be tympanitic, this is a very strong presumption that the child is dead; and peritoneal tympanitis easily discovered in crural presentations, is not very uncommon in its occurrence. So that it is not from the emphysema of the scalp, the discharge of the meconium, the fœtid discharges from the uterus, the quiet of the fontanel, or the quiet of the child, but rather from the desquamation of the uterus, the cessation of the pulsation in the umbilical chord, and above all, from the total breaking up of the bony structure of the cranium, that the death of the fœtus may be most certainly inferred."

ART. II. *Medical Flora; or Manual of the Medical Botany of the United States of North America.* By C. S. RAFINESQUE, A.M. PH. D. &c. Vol. I. Philadelphia. 12mo. pp. 268. 1828.

AT the present day, a laboured argument in favour of Medical Botany is quite unnecessary. Some of the most valued ornaments of our profession are enrolled among the number of its cultivators, and its members have very generally concurred in attesting its utility.

Such being the opinion of medical men, the only question that remains in noticing the work before us relates to the manner in which it is executed. To arrive at a correct answer to this, it will be necessary for us, briefly to notice some previous works on medical botany. By this means we shall be enabled to judge, with more correctness, how much credit is due to the author of the volume under more immediate consideration.

Works or treatises upon medical botany are of two kinds. In the one, the subject is treated of distinctly; the plants are minutely and scientifically described and figured, and their chemical properties and medicinal virtues detailed. In the other, the descriptions are unaccompanied with figures, and the medicinal plants are noticed in connexion with remedies derived from the animal and mineral kingdoms, and those which are

the produce of art. To the latter class belong all the materia medicas, dispensatories, pharmacologies, pharmacopeias, &c. To the former, herbals, medical botanies, and medical floras.

As it regards systems of materia medica, some original ones have been published in this country, and we have also reprints of the most esteemed foreign ones; one or two dispensatories have also been published, besides the Pharmacopeia of the United States.

Though most of these works contain notices of some of our medicinal plants, our present business is chiefly with those productions in which these are made the exclusive subjects of examination. Of such, the only ones deserving of attention, previous to the publication under review, are those of the two Dr. Bartons, and of Dr. Bigelow.

The first of these works in the order of time, is entitled, "*Collections for an Essay towards a Materia Medica of the United States,*" by the elder Dr. Barton; which reached its third, and we believe its last edition, in 1810. This being the first attempt of the kind, if we except the "*Materia Medica Americana potissimum Regni Vegetabilis*" of Schoepf, which, though from an author of great learning, is tainted with old and exploded notions,—we could not reasonably have expected a very perfect work. It is rather an enumeration of native medicinal plants then known, than an accurate account of them. It is unaccompanied with figures, and is destitute even of scientific descriptions. The facts are arranged under nine heads, viz. Astringents—Tonics—Stimulants—Errhines—Sialagogues—Emetics—Cathartics—Diuretics and Anthelmintics.

In the notices of the plants belonging to the above classes, brief as they are, we find much valuable information, both original and derived from other sources, though the author has, in many instances, placed too much reliance upon the testimony of incompetent witnesses. The vague and incorrect notions of our *Indians*, are too often set down as standard authority in favour of the medicinal powers of plants, and

many articles are introduced upon still more questionable evidence.

It must be admitted, however, that this work with all its faults, has served some useful purposes. By its means, the attention of our medical men was first directed to the study of the nature and properties of indigenous plants: "in particular, in the hands of the student of medicine, it has been useful as a guide in conducting him through the extensive wilderness of our riches."

In the year 1817 appeared simultaneously, or nearly so, the "*Vegetable Materia Medica of the United States*," by Dr. W. P. C. Barton, and the "*American Medical Botany*," by Dr. Jacob Bigelow. These works are enriched with beautiful, and generally accurate figures of the plants described; they contain, also, detailed botanical descriptions, chemical investigations, and practical information concerning their medicinal powers. The mooted question, which deserves the preference, we shall not attempt to decide. Both of them are, in some respects, deserving of the highest praise; in others, open to objection.

In the first place then, the works are too costly to be of very general utility. Many medical students, and even many physicians, cannot afford to purchase them. This circumstance operates injuriously in another way. The first impression produced on looking over these volumes is, that they are rather intended as fine specimens of the arts, than as exhibitions of medical talent and learning—rather intended for the table of the drawing-room, than the library of the student. Those who advert to the force of such impressions, must be aware that they operate much to the injury of these works.

Again, so far as it respects the vegetable chemistry contained in them, these works are also defective. There is often a want of accuracy in the analytical details, and the methods pursued are not always the best even then known. Since their publication, however, great improvements have been made in vegetable analysis; the active principles of plants have, in many instances, been separated, and some of the most efficient remedial agents have thus been discovered. The

older methods of investigation have been proved to be extremely inaccurate, and new ones have been substituted. On these accounts the chemical analysis contained in these works can seldom be relied on, though their defects in this particular, are not chargeable in any great degree to the authors.

We shall not occupy time in pointing out the peculiar merits of these works. Their publication, at that time, was a hazardous experiment, which, whether profitable or not to the proprietors, was most certainly in the highest degree creditable to the country, and to their authors. But persuaded as we have ever been of the importance of medical botany, we had hoped to have seen them succeeded by publications equally comprehensive, but far less costly;—such as would have found their way into all ranks and classes of the profession.

After the lapse of eleven years, we are presented from another quarter, with a work which, in many respects, answers these intentions. The author, though not a native, has resided in this country for many years, and is well known as a most active and successful cultivator of the natural sciences, particularly of the departments of zoology and botany. "His qualifications for the task," as he himself states, "result from fifteen years of botanical and medical observations and researches, and eight thousand miles of botanical travels, wherein he diligently inquired and elicited from the learned and the illiterate, the result of their practical experience." *Introduction, page* 8.

According to Mr. Rafinesque, it has been ascertained, that there are nearly six hundred medical plants actually known and used as such, in the United States; many of which, however, are merely medical equivalents. This number being too great for the purposes of a manual, one hundred and five of the most active and efficient medical Types have been selected, figured, and described. The others have been referred to these as substitutes or *succedanea*, when they possess nearly the same ostensible qualities and properties.

The species selected include all those of Bigelow and Barton, and twenty-five additional ones. Most of the figures

were drawn by the author, and a few reduced from the above works; they have been engraved and printed in a style suited to the assumed purpose. The botanical alphabetic order has been adopted, as the most convenient.

At the head of each article the proper botanical name is given; the English, French, and German names follow; next the officinal names used in the pharmacopeias; and lastly, the vulgar or common names of the country, which are variable in almost every section or state. When a plant has received several botanical names, the obsolete are given as synonyms.

After the names follow the botanical and medical authorities consulted, the generic and specific characters, the complete botanical descriptions, the locality or native places of growth, with the general history of the genus and species, forming the botanical sections of each article.

The medical division contains the sensible and chemical qualities of the plant, with the medical properties, including uses, doses, and preparations. Equivalent substances, and various remarks, conclude the article.

The plan of adding medical substitutes is borrowed from the excellent French work of Peyrilhe on Medical Natural History. The knowledge of these medical equivalents, will be found very useful, when the required plants are not obtainable, while some substitute may perhaps be procured. It follows of course, that each equivalent is vice versa a mutual substitute in most cases, although the plants are seldom identical in power and activity.

Such is a brief outline of the scope of this work, drawn chiefly from the Introduction prefixed to it, which in general, has been well filled up by the author. The general principles of medical botany—a critical table of the principal authors and works consulted, and an explanation of some botanical terms precede the notice of particular plants. The plants are treated of in the alphabetical order, and each species is neatly, and in the main, accurately figured, though from engravings on wood.

In the notices of these plants the author has brought together, in a concise manner, what is known concerning their

medicinal powers, and has given copious references to authors who have treated of them more in detail. It should be remarked, however, that he is frequently mistaken as to their precise medical powers, and what he denominates his substitutes, are in some instances, misapplied. These occasional mistakes may be all referred to the fact, that the author is not a practitioner of medicine, and has, of course, been obliged to depend upon hearsay evidence rather than upon personal observation.

As it is, however, the work is valuable to the medical student, and the practitioner will not unfrequently find in it hints which may lead him to valuable discoveries in the vegetable materia medica. With these views, we feel greatly indebted to Mr. Rafinesque for the present volume, and we trust the continuation of it will not be delayed for want of patronage.

ART. III. *American Medical Biography: or, Memoirs of eminent Physicians who have flourished in America. To which is prefixed a succinct History of Medical Science in the United States, from the first settlement of the country.* By JAMES THACHER, M.D. Fellow of the American Academy of Arts and Sciences, &c. 2 vols. 8vo. Boston, 1828.

WE only reiterate a common remark, in asserting the interest attached to the biography of illustrious individuals. If executed in a becoming manner—with a proper attention to the traits that characterise, and the virtues that ennoble, it becomes an inexhaustible source of instruction. "The good that men do," lives after them, and is perpetuated from generation to generation.

Our own profession has not been wanting in such models. It would, indeed, be remarkable if this were not the case. There is no occupation which more constantly calls into exercise the benevolent and kindly feelings of the human heart—there is none in which they more require to be cultivated. The intellect, too, must be improved in all its wide extent of powers. Occasions have occurred, when as much firmness was needed as ever accompanied a general to an assault—and

it has often triumphed as gloriously as with the military victor. Much as we may be disposed, in our hours of despondency, to lament the imperfections of our science, it certainly will bear a favourable investigation on the score of facts observed, of theories arranged with wonderful ingenuity, and of noble discoveries, elicited at the expense of health, and even life itself.

With such feelings towards our profession, and believing that we should be recreants, did we not entertain and foster them, we have ever felt pleasure at witnessing any efforts towards illustrating the character of its distinguished votaries. It is probably no great stretch of national vanity to assert, that of all the learned professions, none in this country approaches nearer to the condition they hold in Europe, than the medical. Many of the most eminent American physicians have been educated abroad, and obtained there all the knowledge that the most celebrated schools could afford. They returned to improve it—to apply it practically to the diseases of their native soil ; and as a result from this combination of intellect and experience, they too have been enabled to aid in enlarging the boundaries of science. In several instances, they have formed medical institutions, and thus gave the first impulse to that general diffusion of knowledge which at present exists among medical men.

We forbear, for obvious reasons, to indicate the more occasional causes that have led to reputation and success. They are sometimes to be found in the individual himself—sometimes events have exercised a benignant sway—while most commonly, a combination of both have led to the prosperous result.

A person who devotes himself to the elucidation of the characters of such men as we have adverted to, deserves well of the community ; and particularly so in our own country. Our history is written in official documents and in newspapers, and we have few of those contemporary annals, which, in other countries, serve either as a guide or an admonisher to future writers.

At an advanced age, Dr. Thacher has undertaken the task of collecting the biographies of distinguished American physicians. We confess we were among the number of those who expected much from this work—we frankly avow our disappointment. We had hoped that it might be an altar on which all might heap their offerings, without any thing to divert their homage, or exacerbate their feelings. We had understood, nay, we had been informed, that the events of the present day in medical politics, were to remain unnoticed. Dr. Thacher has, however, seen fit in several places to take the stand of a partisan—to deliver decisive and sweeping opinions on subjects at least admitting of discussion, and to judge concerning them in a manner certainly not according with the views of many of those, who, before this, have felt for him nothing but respect and esteem.

The radical fault of Dr. Thacher's work, in our opinion, is, the want of a *single* author. Facts might have been obtained, and sketches of characters solicited—indeed, every aid that so voluminous a work, comprising so many details evidently needed—and still the modelling might have been the work of one hand. If this course had been pursued, it would have produced a unity of sentiment and style throughout the work, in which, at present, it is totally deficient. Illustrations of this defect are to be met with from one end of the work to the other. In the lives of some of the more prominent characters, it is however most observable, and of course, most to be regretted. The life of Dr. Rush for instance, though containing some good materials drawn from the eulogy of the late Dr. Ramsay's, is, taken as a whole, a miserable piece of patch-work, altogether unworthy of the subject. In this country, no finer field could be offered for the medical biographer than the life of this distinguished man. But to be his biographer and to do justice to the subject, requires sense, discrimination, and independence. It is much to be regretted that Dr. Thacher did not employ some man of this stamp to execute this part of his work, instead of trusting to the clumsy daubings of one whose ideas of biography do not

soar beyond the chronicling of dates, and the recording of births and deaths.

Another consequence of this mode of getting up this work, is the disproportionate length of many of the lives. The account of Dr. Bard, for instance, occupies forty pages, and that of Dr. Williamson covers nearly thirty—while that of Dr. Edward Miller takes up only seven, and that of Dr. Barton is compressed into two.

We would in the second place suggest, that the biographies *are in too many instances miscellaneous, rather than medical.* It is true, that many physicians in this country have filled distinguished civil and military offices, and every thing of interest relating to these deserves mention; but we apprehend, that the chief aim should have been to develope their acquirements in medicine. If they have published any thing on the science, a brief, but complete analysis of it should have been added—or if, (as is often the case) they were only known as practitioners, their introduction of new remedies—their peculiar views of diseases, and their treatment of them might have been specified. Here, however, we must again mention, that Dr. Thacher is not principally in fault. He has necessarily been in a measure dependent on his correspondents —some of whom seem to consider the appointment to a county court judgeship, a greater honour than to have discovered a valuable indigenous remedy, or to have subdued a herculean disease.

It may be remarked in the last place, as a matter of regret, that many names are excluded, doubtless from a want of sufficient materials. But we should have rejoiced to have seen the names alone, if nothing more, of all the surgeons of the revolutionary war—their place of birth—the time of their death—the regiments to which they were attached, and the campaigns in which they served. A few lines would have sufficed for all this, but it would have added to the interest of the work.

Notwithstanding these objections that we have thus frankly made to the "*Medical Biography*" of Dr. Thacher, we do

not hesitate to declare, that it contains much valuable information. He has brought together a greater number of names than probably any other individual of the present day could have done, and the lives of many cannot be perused without improvement. These pages speak of " men eminent in their day and generation"—of patriots who stood for their country in the cabinet and in the field—of scholars, philanthropists, and christians. The following extracts will give a favourable idea of the work.

The first is from the life of Dr. Boylston, and gives an account of the introduction of inoculation into this country.

" In the year 1721 the smallpox appeared in Boston, and pursued its usual desolating career, carrying with it the utmost terror and confusion. On this alarming occasion Dr. Cotton Mather, the learned and distinguished divine, communicated to Dr. Boylston a publication in the Transactions of the Royal Society, announcing the discovery of a new method of mitigating the virulence of this fatal disease. This intelligence was from Drs. Timoni and Pilarini,* being a concise account of the process of inoculation, as then practised in Turkey by scarifying the skin and applying the matter under a nut shell, but giving no other directions concerning the practice or mode of treatment. Dr. Boylston was forcibly impressed with the benefit of the discovery, and accordingly, after deliberating on the most safe and expeditious mode of thus artificially introducing the disease into the system, he communicated to the medical gentlemen in Boston, the plan he proposed to adopt, and the source whence he derived the first hints of the operation, desiring their concurrence in the undertaking. But Dr. William Douglass, a Scotch physician of some eminence, who had seen the publication in Dr. Mather's possession, and Dr. Dalhonde, a French physician, also of some repute in Boston, united in a violent opposition to the plan, and publicly denounced it as introductory of the plague, which had so often visited and nearly depopulated many cities in Europe and Asia; and declared that the attempt to put it into practice would be no less

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* Dr. Emanuel Timoni Alspeek, who was graduated both at Padua and at Oxford, was residing in Constantinople in the year 1703, and was then struck with the instances which he witnessed of the mitigated nature of the smallpox, when the virus was artificially communicated to the human frame. He wrote an account of his observations to Dr. Woodward, by whom it was inserted in the Philosophical Transactions of the year 1714. Pilarini was a Venitian physician, and published in 1715 at Venice a statement of the success of the Turkish practice.

criminal than murder. The other physicians in Boston not only refused their co-operation in so novel and bold an experiment, but condemned it in their writings, and opposed it in every shape. Dr. Boylston, however, was a man of benevolence and courage, and finding before him a promising opportunity for diminishing the evils of human life, he was not afraid to struggle with prejudice, nor unwilling to encounter abuse in the noble cause. The clergy in general were disposed to aid the project, but a few of the less liberal were instigated to preach against it, and such was their influence, added to that of Douglass and Dalhonde, that the inhabitants became enraged, and were excited to commit atrocious acts of outrage on the person of Dr. Boylston. They patroled the town in parties with halters, threatening to hang him on the nearest tree. The only place of refuge left him at one time was a private place in his house, where he remained secreted fourteen days, unknown to any of his family but his wife. During this time parties entered his house, by day and by night, in search of him. Nor was this all; their rancor extended to his family; for one evening, while his wife and children were sitting in the parlour, a lighted hand grenade was thrown into the room, but the fusee striking against some of the furniture, fell off before an explosion could take place, and thus providentially their lives were saved. Even after the madness of the multitude had in some measure subsided, Dr. Boylston ventured to visit his patients only at midnight and in disguise.

"Undismayed, however, by all this violence, and unsupported by the friendship of any but Dr. Mather, he commenced on the 27th of June 1721, while the smallpox was in its most destructive progress through the town, this untried experiment of inoculation on his own son, a child of thirteen years of age, and two blacks in his family, one of thirty-six, and the other of two years of age; and on all with complete success. This rekindled the fury of the populace, and induced the authorities of the town to summon him before them to answer for his practice. He underwent repeated examinations, and although he invited all the practitioners in Boston to visit his patients and judge for themselves, he received only insults and threats in reply. These facts we have thought worthy of notice, as remarkable in themselves, and as in some degree characteristic of the excitable spirit of the times. In thus encountering obloquy and reproach, however, Dr. Boylston but experienced the fortune of most of those who have attempted to innovate on long established usages, or to take the lead in the career of public improvement. The smallpox ceased its ravages in May 1722, and during its prevalence Dr. B. continued the practice of inoculation to all who could be induced to submit to it. He inoculated, with his own hand, two hundred and forty-seven of both sexes, from nine months to sixty-seven years of age, in Boston and in the neighbouring towns; thirty-nine were inoculated by other physicians after the tumult had in some measure subsided, making in the whole two hundred and eighty-six; of whom only six died, and of these, three were supposed to have taken

the disease in the natural way some days previous to their being inoculated; three of those who died, were his oldest patients. It appears by the accounts published by the select men, that during the same period five thousand seven hundred and fifty-nine had taken the natural smallpox, eight hundred and forty-four of whom fell victims to the disease, being more than one in six. In the vicinity of Boston it had been still more malignant and fatal. The utility of the practice was now established beyond dispute; and its success encouraged its more general practice in England, in which country it had been tried upon but a few persons, most of whom were condemned convicts and charity children. The daughter of Lady Mary W. Montague was inoculated in London in April 1721, being the first instance in Europe, and the convicts were made the subjects of the experiment in August of the same year. Dr. Boylston therefore is justly entitled to the honour of being the first inoculator in America, and this even before the single instance of the experiment in Europe had come to his knowledge." p. 186—188.

Every body has heard of Perkins' Tractors, and we therefore presume the following account of the author will not be unacceptable.

"Dr. Elisha Perkins was born at Norwich, state of Connecticut, in January, 1740, and was educated for the profession by his father. He possessed by nature uncommon endowments, both bodily and mental. In his person he was six feet high, and of remarkable symmetry.

"His ability to perform active professional business was extraordinary; he frequently rode sixty miles a day, and generally on horseback, and this without the aid of artificial stimulants, never making use of ardent spirits. He had contracted a habit altogether peculiar to himself. When making his professional visits and inclined to sleep, he would hand his watch to a person and throwing himself on a bed or couch, give orders to be waked in five minutes precisely; if suffered to sleep six minutes, he would know by his feelings that the time had been exceeded, and whenever the time of sleep exceeded by one minute his rule, he invariably would say that he felt the worse for it. By this practice he was enabled to perform his duties with three or four hours sleep in the night for many weeks in succession, though subjected to great fatigue.

"Having descended from respectable ancestry, who long possessed a distinguished influence in the medical profession in that vicinity, he attained a considerable reputation and popularity. His acquaintance was very extensive, and his great liberality and social habits allured to his house gentlemen from different parts of the country, and his inquiring mind seemed ever to search for something new in every sphere which could better the condition of the human family. He had a happy facility in communicating his views, and turning to some valuable purpose such information as he

could derive from others. He made great sacrifices in establishing and supporting an academy in Plainfield, and other useful improvements in that town. He was esteemed as a man of strict honour and integrity of character.

"Dr. Perkins entered with peculiar zeal into a new project for the cure of diseases, which gained no inconsiderable celebrity at the time of its promulgation in 1796. Conceiving an idea that metallic substances might have an influence on the nerves and muscles of animals, and be capable of being converted to useful purposes as external agents in medicine, he was induced to institute numerous experiments with various kinds of metals, till at length, after several years pursuit of the object, he discovered a composition which would serve his purpose, and from which he formed his Metallic Tractors. These consisted of two instruments, one having the appearance of steel, the other of brass. They were about three inches in length, and pointed at one end; and the manner in which they were applied was, by drawing the points over the affected parts in a downward direction for about twenty minutes each time. The complaints in which this operation has been found most useful, according to Dr. Perkins, are local inflammations in general, pains in the head, face, teeth, breast, side, stomach, back, rheumatism, &c. Dr. P. obtained a patent for his discovery, and traveled through the country to disseminate his new practice, and his career was attended with great success. Numerous cures were effected by the employment of the Tractors in his hands and in those of others. His enthusiasm pervaded all ranks, and received the countenance of many enlightened physicians and philosophers. Pamphlets were published to explain the modus operandi of the new remedy, and the Professors of three universities in America gave attestations in favour of its efficacy. The operation was alleged to be similar in its principles to animal magnetism, or, according to some, animal electricity or galvanism.

"The fame of the Metallic Tractors soon reached Europe. They were introduced at Copenhagen in 1798, where twelve physicians and surgeons, chiefly professors and lecturers in the Royal Frederick's Hospital, commenced a course of experiments, and reported the result to Professors Herholdt and Rafn. The experiments, fifty in number, were deemed sufficiently important to demand publication in an octavo volume. The Professors introduced the term Perkinism in honour of the discoverer, and asserted that it was of great importance to the physician. 'We do not find it possible,' say the professors, 'to apply with any justice against Perkinism, the arguments and doubts which have been raised against animal magnetism. Our experiments have demonstrated to our satisfaction that there is a great deal of reality at bottom." This book was translated into German by Professor Tode, Physician to the King of Denmark, and thence into English by C. Kampfmuller. After the death of Dr. P. Mr. Benjamin D. Perkins, his son, repaired to London, and securing a patent, immediately published a tract on the discovery. Soon after this, Dr. Langwor-

thy of Bath, having recently returned from America, commenced a course of experiments at Bath and Bristol hot wells, with a view of ascertaining the merits of the Tractors. The result was published in a pamphlet, containing a collection of cases, highly creditable, as he judged, to the metallic practice, with ingenious observations on the theory of their operation.

"In 1804 the Perkinean Institution, as it was called, was established in London, chiefly with the view of benefiting the poor by the use of the Tractors. The Right Hon. Lord Rivers was President, and Sir William Barker, Vice President of this Institution, and funds to a large amount were obtained by donations and subscription. In a pamphlet entitled an account of the Perkinean Institution, published in London in 1804, it is stated that the communications of cases are from disinterested and intelligent characters from almost every quarter of Great Britain, and that amongst others whose names are attached to these communications, are eight professors in four different universities, twenty-one regular physicians, nineteen surgeons, and thirty clergymen, twelve of whom are Doctors of Divinity. The cases published amounted in March 1802 to about five thousand. Supposing, says the writer, that not more than one cure in three hundred, which the Tractors have performed, has been published, and the proportion is probably much smaller, it will be seen that the number to this time has exceeded one million five hundred thousand! In answer to the objection that the cure was effected merely through the inflence of the patient's imagination, the promoters of the Perkinean Institution asserted that multitudes of cures were performed on infants, and even on horses,* where of course such influence could not be presumed to exist.

Such is the history of the Metallic Tractors. It is to be considered a singular and unaccountable circumstance that the remedy should have been consigned to oblivion. Is it within the bounds of probability that the vast amount of authenticated evidence that has been produced, should be resolved into a delusion, a mere phantom of the imagination? However enthusiastic the promoters of the novel discovery may have been, it is most clear that autopsical evidence was in every instance at command, and might have precluded the possibility of deception. If, therefore, Perkinism has shared the fate of Animal Magnetism, there is no sufficient reason for supposing that its discoverer should be placed in the same class with Mesmer, as he undoubtedly was a man of honourable principles and character.

"Dr. P. directed his benevolence to another object of considerable importance in medicine. He introduced into practice a remedy consisting of a combination of the vegetable with the muriatic acid, in the form of

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* In many parts of the country the use of the Tractors upon horses had become as general as on the human body, and numerous extraordinary cures were certified.

common vinegar saturated with muriate of soda*. This diluted with three parts of hot water in the dose of a table spoonful, he administered with great success as a powerful antiseptic in the low state of dysentery and ulcerated sore throat. During the prevalence of yellow fever in New-York, in 1799, he visited that city, to avail himself of opportunities of testing by experiment the efficacy of the above-mentioned highly antiseptic remedy, believing that antiseptics had been too much neglected in that formidable disease. After about four weeks unremitted assiduity in attending the sick, he took the disease himself, of which he died at the age of 59 years." p. 422—425.

The following anecdote is related of Dr. Hunt.

"A cancer was forming in his head, where he himself could not observe it. He considered it dangerous, and even apprehended that his end was near. In 1789 he went to Boston, thinking it might be for the last time. The Counsellors of the Massachusetts Medical Society were then in session. At the request of his brother-in-law General Cobb, Dr. Hunt went to them that they might examine the cancer. They decided that it might be eradicated. It was agreed that on the next day the operation should be performed. Accordingly in a full meeting Dr. Warren was selected as the operator. 'We must bind his hands,' said Dr. Warren. 'No cable in Boston could hold them fast,' rejoined Dr. Hunt; and with an effort that astonished the physicians themselves, he quietly laid his head on a pillow, and bade them begin. The ear was first nearly cut off, though afterwards successfully replaced; then for thirteen minutes the operation continued, and every stroke of the knife, so near the auditory nerve, was like the report of a pistol. Dr. Hunt did not flinch in the least, though the sweat poured down his cheeks profusely. At length all was done; and as he raised his stately form, his first words were, 'Now, sir, give me a certificate.' Dr. Warren did not understand him, and asked for what reason. 'Why,' continued Dr. Hunt, 'that I was not cropped for making money.' Dr. Warren laughed, and pleasantly rejoined, 'I will give you none, for I hear that no physician in the west has made more money than you.' The meeting was then adjourned, all agreeing that they had never seen a man of more firmness or better humour." *Appendix, p.* 251.

The biographical sketches are prefaced by a "History of Medicine" in America. It extends through eighty-five pages, and contains much curious information in relation to the early

* This remedy is the same as is recommended by Dr. Wright of Jamaica, except that the acetic is substituted for the citric acid.

progress of medicine in this country. The great objection to it is, that it enters into details too minute and unimportant. That part of it which relates to the more recent history of medicine among us, is by no means so satisfactory, and abounds in errors and misstatements. Of the account which is given under the head New-York, part is pure fiction, and much of the remainder is a downright insult to the good sense and knowledge of the profession in this state and city. Whilst the pretended improvements in practical medicine of one or two individuals, whose sole claim to notoriety rests upon the puffs which they have published of themselves, are ostentatiously obtruded before the public eye, almost every thing of a character *really* creditable to the talent and science of the profession, is *purposely* omitted. We say *purposely*, because we are convinced Dr. Thacher never wrote this part of his history, and he has only fallen into this injustice, by a misplaced confidence in men skilled in all the arts of deception.

In relation to the recent controversies which agitated the profession in this city, Dr. Thacher, instead of maintaining the dignified impartiality of the historian, has chosen to enter the lists as a partisan of the defeated party. He gives the following very amusing account of the catastrophe which befell them.

"For a period of about seven years subsequent to the union of the two schools, the College of Physicians and Surgeons was on the march to the highest degree of eminence, and its reputation was recognised in every portion of the union. The class of students consisted of two hundred, and the number was increasing with the opening of each session. But from some cause [?] those professors, whose talents and zeal had been universally acknowledged, [! !] were assailed with clamorous accusations, and charges of serious import were arrayed against them: these, however, on investigation by the regents in March, 1825, were declared to be unsubstantiated, and were pronounced by that honourable body, in their elaborate Report, to have arisen from jealousy and professional rivalry. Broils and contention, nevertheless continued, and the opposition assisted systematically in their purpose. In April, 1826, the professors, wearied with unavailing attempts to silence the opposition, came to the conclusion that "it would best consist with their own self-respect" to withdraw altogether from the

institution, and accordingly they tendered their resignations of their professorships and offices. The board of regents accepted their resignations, April 17, 1826." p. 55.

For the purpose of rendering this part of his history a little more complete, we present him with the following *morceau.*

"Five of the seven persons who constitute the medical faculty of Rutgers College, viz.—Drs. Hosack, Mitchill, Francis, Mott, and Macneven, were, previously to April last, the professors of the College of Physicians and Surgeons in New-York. They thought it *necessary*, or *convenient*, or *politic*, (and it is not exactly known which,) to resign their places; but, with the exception of Dr. Mitchill, all signified to the Regents their willingness to be re-appointed, finding, it is presumed, that this *ruse de guerre* did not answer expectation. The Regents however, who saw no difficulty in filling the chairs, to say the least of them, with gentlemen full as competent as those who had just resigned, refused to re-admit any one of them. Whereupon they applied to be made a faculty in Columbia College, and being refused, they applied to Union College for the same purpose; still not succeeding, *in extremis* they make an audible appeal to Rutger's College, New-Jersey, *and are admitted:* one of the conditions of the contract being, that Rutgers College shall receive the sum of TEN DOLLARS for each and every candidate which these gentlemen shall recommend to the degree of Doctor of Medicine!

"As the fact of the late Professors having applied for re-appointments, after their resignation, has been very boldly denied, I shall present the following extract of a letter, addressed by Dr. David Hosack to the Hon. Gulian C. Verplanck, as conclusive on this point:

"'When we the late Professors left the College, we entered into an obligation to each other to combine our interests and our labours. I find to my surprise, that Dr. Mott and Dr. Macneven have *secretly* offered themselves to the Regents as candidates for their former places in the College, and that too *under any circumstances.* I therefore feel myself absolved from my contract with them, but I cannot suffer my old friend and colleague, Dr. Francis, to become a sacrifice upon this occasion—if therefore he can be provided for, and the obstacles to our admission removed, I should certainly have no objection to return to that institution, *but not otherwise.*'"—*Annual Address before the State Medical Society, Feb.* 1827. By JAMES MANLEY, M.D. &c.

It is not our intention to enter upon an exposure of all the errors and misstatements which have crept into Dr. Thacher's work. The task would be too painful to us, knowing as we do, that *with him* they could never have originated. We re-

nerate his age and respect his talents, and most deeply do we regret that it has been his misfortune to fall into the snares of deceivers, who to bolster up a windy reputation, have been willing to sacrifice the character of this book, as well as that of its venerable author.

ART. IV. *Fragmens de Médecine Pratique, lus a la Société de Médecine et a l'Athénée de Médecine de Paris.* Par F. O. DOUCET, Docteur en Médecine, &c. &c. Paris, 1828. pp. 48.

THIS little pamphlet was published by its author, who is a resident practitioner in this city, during a visit to Paris. It relates to a subject of great practical interest, and the manner in which it is treated, does by no means detract from the interest of the subject. It is at once concise and perspicuous, and may serve, we think, as a model to some of our more voluminous authors.

It comprehends two papers; the first on *Tetanus*, the second on *Bilious fever*. Both were read before the Medical Society and the Medical Atheneum of Paris, and both ordered their publication.

On the subject of tetanus, Dr. D. relates three cases of the traumatic form of that disease, all cured by cold affusions, (douches poides), with the concomitant treatment by means of stimulants, tonics, and diaphoretics. The first and last case fell under his own observation, and the second was communicated to him by a Canadian practitioner, named Dr. Arnoldy, of Montreal. The introductory remarks are so replete with correct reasoning and sound judgment, that we feel confident they will not fail to redound to the credit of their author, by being copied here as a specimen of his style of writing.

"Whenever a disease is unknown in its essence, all treatments are necessarily empirical, and, in this alternative, we cannot deny a decided preference to that which has succeeded the most frequently and in the shortest time.

"The nature of maladies is so imperfectly understood, not-

withstanding the improvements afforded by pathological anatomy, that we cannot wonder at being compelled, in most cases, to resort chiefly to empirical treatments in preference to means apparently the most rational. The reason is obvious: empiricism is constantly the result of observation, whilst *rationalism* is often the offspring of systems; and since we have been taught to discover with what readiness the most discordant and inconclusive facts are brought to support medical doctrines, we cannot but use the greatest reserve in adopting the practical consequences that are deduced from them. These reflections are suggested by the disease which is the object of this memoir."

Following this reasoning, we say the pathological nature of tetanus is not understood, its treatment is, therefore, empirical. Whatever opinion might be successfully adduced to prove the contrary, as this would not be a difficult matter to a thinking mind, we cannot, nevertheless, but felicitate the profession on the rapid progress that pathological inquiries are making at present in France, and in this country, as well as in some parts of Great Britain. This mode of proceeding in the knowledge and treatment of diseases was discovered and taught by Bichat, and although somewhat exaggerated by M. Broussais, forms the basis of the system now pursued in France, as amended and applied to practice by the modern adepts of the school of that celebrated reformer.

We now proceed to give a brief sketch of Dr. Doucet's cases.

The first is that of a farmer of Detroit in the state of New-York, aged 37, of a strong constitution. On the 6th of June he wounded his great toe, but continued his occupation; the wound cicatrised on the 24th, and constipation, painful tension of the back of the neck, extending along the spine and disturbed sleep, made their appearance.

On the 26th, emetic tartar is prescribed. The 27th, difficult motion of the jaw; twenty grains of calomel, with enemata, and a moderate dose of camphor and opium. 28th, mouth closed; fifteen buckets of cold water poured from a certain height, which produced syncope. After reaction, the

jaw could be moved. In the evening, no exacerbation; eighteen buckets are poured again, followed with syncope. During the night, the symptoms grow worse. In the morning of the 29th, the dread of water increases the spasms; affusion of six buckets; no spasms until the following night. The 30th, A. M., affusion; enema producing one stool; in the evening, refusal of affusions; tobacco glyster, infusion of cinnamon as a drink, sixty drops of laudanum. These means bring on no change.

1st July, A. M., spasm violent. Fifteen buckets, with relief; in the evening, thirteen buckets, syncope, followed with some perspiration, spontaneous stools, motion of the jaw. For twelve more days the same treatment is pursued, and a final cure takes place. During the whole course of the disease, the stools and pulse had been natural.

The third case is that of a joiner 34 years old, of a robust constitution. Dr. Doucet at first suspected the case to be a bilious fever, the symptoms of which appeared prominent; but on the following day, tetanus was manifest; twenty ounces of blood are drawn, which bring on syncope. The next morning, 3d August, spasms increased; opium in large doses is given through the mouth and in glysters. The 4th, no relief; sixteen buckets of cold water, followed by syncope, and in the evening, opium as before. 5th, symptoms still increased; eighteen buckets, without much relief. 6th, spasms renewed several times during the night; eighteen buckets of cold water, followed with sensible amelioration. 7th, 8th, and 9th, symptoms return, but less violent; ten buckets every day, with the same concomitant treatment. 10th, convalescent.

The concomitant treatment pursued in both cases consisted of camphor and opium, warm wine, and aromatic warm drinks. The affusions were administered in the following manner. The patient is placed in a bathing tub, and as many buckets of cold water poured upon his head as he can bear; after which, the body is wrapped up in flannel, and diaphoresis promoted by means of dry frictions and the remedies above mentioned.

It is worthy of remark, that the syncope which follows the employment of cold affusions, is more or less sudden as the tetanic spasm is more or less violent, whereby the muscles are relaxed for some length of time. "This mode of subduing the muscular rigidity," says the *Gazette de Santé*, "appears in many cases preferable to bleeding. This last mentioned operation weakens all the systems in a direct manner, without bringing on any change in their relative situation. Cold affusions, on the contrary, by the violent impression they produce on the whole economy, determine a favourable change in the general sensibility of the nerves of locomotion, which, whatever may have been said to the contrary, are evidently the sole organs affected in tetanus. The patients submitted to this violent operation, says Dr. Doucet, rise from their syncope in a state of feelings totally different from what they experienced before its administration, and it is only some time after reaction has taken place, and after it has produced all its effects, that tetanic spasms return, until they are completely subdued by the repetition of this energetic process."

We must also observe, that both patients were of a robust constitution; and it may be a question how far the powerful means made use of for their cure, can be applied to others than those whose vital principle possesses a great degree of vigour.

Dr. Doucet deserves credit for having revived a therapeutical indication which has been long in disuse; nay, we cannot deny him the originality of cold affusions, in the manner he has recommended and successfully tried them; and if after more observations and trials, his process is found to succeed in other hands as it did in his own, Dr. Doucet will have rendered a very important service to science. Indeed, it was the conviction of the inefficiency of all our therapeutical means that prompted the great Paré to bury one of his friends affected with locked-jaw in a dunghill, thereby rescuing him from inevitable death.

Before we drop the subject, however, we beg leave to suggest the propriety of further researches into the real diagnosis of tetanus; for we have not been able to peruse Dr. Dou-

cet's cases, without being struck at their peculiar mildness, the length of their duration, the influence of the concomitant treatment, and the obscurity of the traumatic cause. These reflections, which may be verified by examining the sketch we have given of them, lead us to suggest whether a great many of those cases reported as having been cured, some by cold water, others by warm applications, and other means which, however active, do not produce effects adequate to the severity of tetanus, might not be considered rather as belonging to that class of spasms and convulsions so easily confounded with tetanus. Were it necessary to prove our assertion of such errors often taking place in the diagnosis, we might refer to many cases extant; among others, to that related by Professor Chaussier, inserted in the *Dictionnaire des Sciences Médicales*, article *tetanos*. "Professor Chaussier," says the writer of the article, M. Fournier-Pescay, "was called about twenty years ago, to a young man labouring under obstinate costiveness and violent pain in the intestines, after which tetanus had supervened. The physician ordered a potion composed of castor oil and syrup of peach flowers, which produced copious stools and brought out a large worm, and the tetanus immediately disappeared. This young man had received a few days before, a wound from a sword, which had but slightly involved the skin, and had stopped on one of the ribs. *Had a traumatic cause been suspected*, the patient would inevitably have perished. But the diagnostic was evident to a competent observer, and it did not escape the vigilant eye of the illustrious professor."

There are a number of cases on record, where violent spasms and convulsions similated tetanus, and it requires an experienced judgment to distinguish them. Those related by Dr. Doucet, however, appear to have been well marked instances of tetanus, whether the epithet *traumatic* can be strictly applied to them or not; yet, as we have already observed, we leave it to the reader to judge for himself. For ourselves, we do not hesitate a moment in recommending the process adopted by that gentleman; like Dr. D., the practitioner must not be deterred by the violence of its effects, for reac-

tion will shortly succeed the consequent syncope. We all know how insensible tetanic patients are to the action of the most powerful therapeutical agents. The writer of this article has read of a case wherein a physician in the West Indies administered more than three hundred grains of solid opium in less than three days. The London Medical and Physical Journal for 1818, contains one of the most remarkable instances of this sort; it is related by Dr. Painchaud of Quebec. After a copious evacuation of blood of nearly four pounds, that physician gave ʒj of solid opium, and the same quantity of calomel, all in one dose. This was repeated several times, and a cure was speedily obtained.

We have little to say on the subject of Dr. Doucet's memoir on bilious fever. His object appears to have been merely that of making the citizens of Paris acquainted with the nature of fevers as observed in the western parts of this state and of Canada, and with the plan of treatment adopted both in the United States and in Canada against those diseases, which treatment is known to be widely different from that of the French in similar cases. One fact is worthy of notice, with respect to the bilious fever of Detroit. Dr. Doucet, after having left Canada, his native place, resided three years in Detroit previous to his coming to this city. During his stay at that place, he observed that bilious fever regularly appeared every fall, and with different characters every year. In the first year, it was complicated with hepatitis; in the second, with pneumonitis; and the third, with gastritis.

In his conclusion, Dr. Doucet hints at an object of preparing a more detailed and complete treatise on that fever, for which purpose he has collected a great number of notes and cases taken on the spot. Such an undertaking is well worthy of his attention, and he cannot fail to command the interest and best wishes of the profession.

ART. V. 1. *Tables in Illustration of the Theory of Definite Proportionals.* By WILLIAM THOMAS BRANDE, F.R.S.

2. *A New System of Chemical Philosophy. Part First of Vol.* 2. By JOHN DALTON, F.R.S., &c. Manchester, 1827.

A THIN octavo, bearing the title of the first of these works, has recently been published in London. From the introduction which is prefixed, we learn that the tables of Prime Equivalents refer to hydrogen as *unity*, and are founded upon the assumption that the specific gravity of hydrogen is to that of oxygen, as 1 to 16; 100 cubic inches of hydrogen being regarded as weighing at mean temperature and pressure, 2·118 grains, and 100 cubic inches of oxygen 33·8 grains; water, therefore, composed of two volumes of hydrogen, and one volume of oxygen, consists by weight of 1 of hydrogen and 8 of oxygen.

The first of these tables exhibits the specific gravity of the most important gases, with their equivalent weights and volumes, and is intended to assist the student in acquiring correct notions of the relation between combining *weights* and *volumes;* and more especially, to illustrate the important facts respecting the combinations of gaseous bodies, for which we are indebted to M. Gay Lussac, who has shown that they unite in very simple proportions, and that the diminution of bulk which they often suffer in combining, is also an equally simple ratio.

In the second table, the elementary substances and their compounds are arranged nearly in an alphabetical order. The authorities upon which the equivalents of the former are given are, with few exceptions, annexed; and of the latter, the components are in most cases similarly exhibited.

It is wholly useless at the present day to say a word concerning the value of tables of this sort. The representation of the various chemical substances by numbers, has introduced so much simplicity into the various processes of the laboratory, that chemists appear only to vie with each other who shall determine them in the most accurate manner. New and often repeated analysis, the correction of errors in former

ones, and a general improvement iu analytical investigations, are the means by which this object is to be accomplished.

Mr. Brande has availed himself of the best authorities in the construction of his tables, and we should suppose they would bear a reprint in this country. We make this suggestion for the benefit of some of our American editors of chemical books, in the hope that they will supply a deficiency no longer in the least degree excusable.

The first volume of the work of Mr. Dalton was published many years since, and is no doubt familiar to our chemical readers. Of the present volume we find an interesting notice in the sixteenth number of Brewster's Journal, from which we shall make a few extracts.

Mr. Dalton, in the volume before us, treats of *compounds of two elements*, and he divides it into six sections; the first on oxides; the second on sulphurets; the third on phosphurets; the fourth on carburets; the fifth on alloys; and the sixth on triple alloys. The volume is concluded by an appendix, containing corrections of his former volumes in consequence of new discoveries; and some remarks on recent investigations on heat.

Mr. Dalton enumerates six methods for ascertaining the proportion in which oxygen combines with a metal; first by combustion in air or in oxygen; second by solution in an acid, and subsequent precipitation by an earth or an alkali; third by precipitating one metal by another, whereby oxygen is thus said to be transferred from the one to the other; fourth by the hydrogen evolved in solution by an acid; fifth by transferring a lower oxide into a higher, by means of a solution of oxymuriate of lime (bleaching powder;) and sixth, by the nitrous gas, evolved during solution in nitric acid. The first four methods have been used by chemists for several years past; the two last Mr. Dalton has added from his own experience, having found them, as he says, "very useful assistants in various instances." "The last method by nitrous gas," he adds, "has indeed been proposed before, and labour bestowed on it, both by others and myself, but without

reducing the results to any certainty, till lately; the principal cause of this want of success has arisen from misunderstanding the nature and constitution of nitric acid." (page 4). "It sometimes happens, that the nitrous gas is partly or wholly retained by the residue of nitric acid; but in this case the oxymuriate of lime may be applied to convert the nitrous gas into nitric acid." (p. 5.)

Accordingly this method of ascertaining the proportion of oxygen which enters into combination with a metal, is the one adopted by Mr. Dalton. But the method is objected to by the author of the notice, as not likely to be approved by practical chemists; for though assuredly it must be possible in some instances to ascertain the combining oxygen by this method, yet there is hardly an instance where other methods equally easy and more susceptible of accuracy, could not be adopted. Besides, the method rests on a somewhat remote deduction from an assumption that the sole product is a nitrate. Now we know that ammonia results, in some cases, from the action of nitric acid, and its production ought perhaps to be suspected in other cases where it has not yet been ascertained.

Under the section of the carburets, Mr. Dalton's opinion of the nature of steel is deserving of great attention.

"From the above account of steel, it is evident there is an essential difference between it and pure iron. That difference consists, according to the common opinion, in steel being a *carburet* of iron, or carbon and iron united. The fact of the union of carbon and iron, in the formation of steel, does not seem to me satisfactorily proved. Mr. Collier asserts, that iron gains about 1–180th of its weight by being converted into steel. But Mr. Muchet found, that though steel gains weight upon the iron when copiously imbedded in charcoal, yet it loses weight if the charcoal is only 1–90, or 1–100 of the weight of the iron. (*Phil. Mag.* Vol. 13.) The same ingenious gentleman seems to estimate the carbon in cast steel from synthetic experiments, to be 1–100th of its weight.

"From analytic experiments, however, there does not appear reason to believe that steel contains so much, if any

charcoal. Pure steel dissolved in dilute sulphuric acid gives hydrogen gas containing no carbonic acid nor oxide, neither is there any appreciable residuum of any kind in general.

" On considering all the circumstances, I am inclined to believe, that the properties that distinguish steel from iron are rather owing to a peculiar crystallization, or arrangement of the ultimate particles of iron, than to their combination with carbon, or any other substance. In all cases where steel is formed, the mass is brought into a liquid form, or nearly approaching to it,—a circumstance which allows the particles to be subject to the law of crystallization. We see that great change is made in steel by the mere *tempering* of it, which cannot be ascribed to the loss or gain of any substance, but to some modification of the internal arrangement of its particles. Why then may not its differences from iron be ascribed to the same cause ?" pp. 216—218.

Concerning the *alloys*, Mr. Dalton advances the opinion, that they are chemical compounds. One striking instance of a true chemical compound occurs in the alloy called speculum metal. This alloy is formed out of tin and copper. The smallest deviation from the true proportions, it is well known, will spoil the alloy as a reflector. These proportions were, by laborious experiment, ascertained by Mudge to be 32 of copper to 14½ of tin. Now dividing each of these quantities by 2, we get 16 of copper = 4 atoms, according to Dr. Thomson, and 7·25 of tin = 1 atom. This, be it observed, is the result of experiments made forty years ago, when atomic weights had as yet been unheard of.

But though we agree with Mr. Dalton in considering many alloys as chemical compounds, we by no means would take for granted, that all alloys are compounds. Thus an alloy of silver and steel was formed by Mess. Stodart and Faraday, by melting these two metals together. When this alloy was forged into a bar, and then dissected by means of dilute sulphuric acid, the silver was discovered, not in combination with the steel, but disseminated in threads throughout the mass. These threads of silver may give toughness to the mass, just as hair imparts strength to common mortar; but

the silver is as distinctly in a state of mechanical mixture as hair is in common mortar. In like manner small quantities of other metals or alloys are often added, for the purpose, as it strikes us, of imparting mechanical properties, by mixture rather than by combination. But besides combined and mixed alloys, we should regard it quite possible, that some alloys in the solid state, are in fact *frozen solutions.* Mercury, there is no doubt, is capable of holding some amalgams in solution; and till experiment shall contradict the supposition, we shall regard it as conceivable and probable, that some melted masses of metal will prove to be *solutions* of one metal or alloy in another metal or alloy; and that the solid masses derived from such liquids are congealed solutions.

The concluding remarks of the notice cannot fail to interest those who are acquainted with the history of Mr. Dalton.

"Having thus endeavoured to give some idea of the nature and merits of the volume before us, we take leave of it, recommending it to the attention of our chemical readers. The work is one which will not be read as an introduction to chemistry; but it will be perused with interest by all who have made some progress in the science, and who make its doctrines a subject of habitual reflection. Of almost any other chemist than Mr. Dalton, we would have complained of the ignorance in which, it is evident, he has kept himself of the researches of other chemists. But we cannot speak in the language of complaint of Mr. Dalton, known to the world as a very apostle of science—leaving all worldly advantage behind to follow it, and proceeding on cheerfully, without scrip, or purse, or staff. We know not how to express the feelings with which we glance over the last three pages of this volume, containing a list of the scientific papers which Mr. Dalton has published during a period of thirty-five years. One discovery of his gives a glory to the scientific character of the nation, independent of other discoveries which alone would rank him high as a philosopher. And for whose good? We cannot look to this list without believing that Mr. Dalton is more likely to have lost money than to have gained by all his publications. In other countries, less happily constituted go-

vernments than our own would not have hesitated to put into the hands of such a man the means of prosecuting, with independence, those discoveries which in all after ages were to render his native land illustrious among civilized nations. Almost the only means of profit held out to scientific men in this country is lecturing,—an occu, ation not always adapted to individuals, who are yet well qualified for the prosecution of scientific research. Assuredly it does become the scientific journalist to complain loudly, that even this precarious encouragement to science is about to be taken away; for a system has begun of publishing lectures, taken for this purpose by professional reporters, who, by attending the same course twice, may copy a lecturer's manuscript as accurately as if it were before them; and the law has, in due solemnity, pronounced that this description of robbers, who prey upon the vitals of science, are not to be molested in their lawful calling in this free country. We have no fears for the progress of science; but, looking to the shameful neglect of their rights in this country, and to the munificent patronage which is extended to scientific men in other countries, we have fears for the share of glory that will fall to Britain. Amidst these complaints, however, it would be unjust in us to forget that in the case of Mr. Dalton, the neglect upon which we animadvert was alleviated by his being presented, through the hands of Sir Humphrey Davy, with a royal medal, when his own genius had established a fame which envy could no longer tarnish, and to which royalty could add no lustre."

BIOGRAPHY.

ART. I. *An Eulogium on the late* WRIGHT POST, M.D. By J. AUGUSTINE SMITH, M.D. Professor of Anatomy and Physiology in the College of Physicians and Surgeons. Delivered in the Chapel of Columbia College, at the request of the Medical Society of the City and County of New-York, on Wednesday Oct. 8, 1828.

IT has not often happened, Mr. President, and Gentlemen of the Medical Society, that surviving friendship has been called upon to commemorate departed worth, that was modest, quiet, and unobtrusive. For in every age and in every country, the exalted in rank and the daring in action, have exclusively claimed and received, whether living or dead, the admiration and applause of their fellow-mortals. At particular times indeed, and under extraordinary circumstances, some exceptions to the absolute universality of this remark may have occurred. Thus, during that most wonderful era of Grecian history, which is destined, I apprehend, to stand for ever unrivalled in the annals of our race, philosophy and philosophers enjoyed a distinction which in no time to come can they again command. And at later periods, men who were willing to shed, or who did actually shed their blood for the faith which they professed, obtained from their adherents the applauses which they so justly merited. But it was from their own immediate followers alone that these martyrs derived their honours; the mass of mankind still reserving their plaudits for kings, statesmen, and above all, warriors.* Why these last should enjoy this pre-eminence

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* Time, however, does speedy justice to those who have nothing but political eminence to distinguish them; the fame of such persons being as evanescent as it is undeserved. With the really great among writers, philosophers, and patriots, the case is reversed—the lapse of ages but

would form a curious, and as far as my reading extends, an untouched subject of philosophical inquiry. But this is not the occasion for entering into such disquisitions. The fact is all that at present concerns us, and that I conceive to be as unquestionable as the sentiment on which it is founded is illusory, in the extravagance at least to which it is apt to be carried. That a just and frequently a very high reward should be extended to a successful military leader, is right and proper; but that a false and most mischievous importance has been attached to feats in arms, is, I think, demonstrable. Let us hope then, that this delusion, like so many others, will pass away, and that men will learn at length to appreciate as they should do, those more humble pursuits by which good is conferred without the pomp of state, and above all, without the miseries of war. Among these pursuits medicine must ever hold a high rank, and in that profession few persons in our country have filled so large a space as the late Dr. Wright Post. For twenty-seven years he was the leading practitioner in this city; and the history and character of a man who could for so long a period maintain such a station, cannot be, and as we shall soon see, is not devoid of interest, particularly to those who move in the path which he so successfully trod. I must premise, however, that of Dr. Post's early years my information is exceedingly scant, as I have been unable to procure many particulars of this portion of his life. The few which it has been in my power to collect, I will now detail.*

Dr. Post was born, I understand, near Hempstead, Long-Island, about the year 1766, and was sent to a neighbouring

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brightening their reputation. The number of these immortals to be sure is but small; mere rank, however, will not confer a seat among them; the names of emperors, &c. though chronicled, only slumbering in our books. Successful leaders of armies fare better, I acknowledge, though even Alexander must yield the palm to Aristotle, and the Duke of Marlborough is altogether in the shade compared with Newton and Locke.

* As soon as I determined to comply with the request of the Medical Society by delivering this Eulogium, I took measures to procure the necessary facts. Circumstances beyond my control foiled my efforts, and hence the meagerness of my narrative.

school. What progress he made in his studies I do not know, but in 1782 he was a student of medicine with Dr. Richard Bayley, a gentleman whose daughter he subsequently married. In 1789, at the early age of 23 years, he was a lecturer on anatomy. In 1792, he was appointed professor of surgery in Columbia College, and immediately went to London to improve himself in his profession. On his return, he was made professor of anatomy in the same institution. He then took a second trip to Europe, for the purpose of procuring an anatomical museum, and brought back the one now in the College of Physicians and Surgeons, at that time undoubtedly, and perhaps still, the first on the continent. His lectures on anatomy were delivered in Columbia College until the medical department of that institution was merged in the College of Physicians and Surgeons, in the year 1813. In this last establishment he continued his labours, which were alike creditable to himself and useful to others, until 1826, when he resigned his anatomical chair, and the presidency of the College. To this latter office he had been appointed on the death of Dr. Bard, 1821.

The health of Dr. Post was always feeble. In 1815, he was obliged to cross the Atlantic for its improvement, and so much benefit did he derive from the voyage, that he was enabled on his return to resume his professional duties. With these he was occupied until the close of the last winter, when indisposition confined him to his house. Hectic fever supervened, and on the 14th day of June he was released from his cares.

It should have been stated, that in the year 1792 Dr. Post was appointed one of the surgeons of the New-York Hospital. This situation he filled with reputation to himself and greatly to the advantage of others until 1821, when no longer able to discharge the active duties of the place, he resigned it, but continued a consulting surgeon of the institution until his death.

Such is a brief statement of the circumstances which marked the life of Dr. Post. Not numerous, nor to superficial observers important, these circumstances may, nevertheless,

afford matter for useful reflection to two classes of persons. First, to those who are fond of philosophising upon the more general events of this sublunary world. And secondly, to those who, although more indifferent to remoter speculations, are still anxious to draw lessons of practical instruction from the example of those who attain what all do seek—wealth, rank, and reputation. To the former, I shall offer some remarks connected with the progress and condition of the two more important branches of the healing art; with the latter, I will examine the character of Dr. Post in reference more particularly to the great success which attended his professional career.

I have already remarked, that Dr. Post was one of the surgeons to the hospital. In that capacity, he tied with success in the year 1813, the external iliac artery. In 1817 he was equally fortunate with the subclavian. This operation was then unparalleled in surgery; but since that time, such has been the improvement of this branch of our profession, that arteries still deeper seated have been reached. And I take occasion to mention, and I do it with pleasure as a just compliment to our city and our country, that a surgeon of New-York, Dr. Mott, is without a rival in aneurismal diseases. In one instance he passed a ligature around the inominata, and in another, he secured the common iliac—a feat as yet unequalled in any other quarter of the globe. On the latter occasion the event was favourable. A similar result, I have already observed, attended the operations of Dr. Post; so that we can now see why it is, as the bills of mortality prove, that the mean average duration of human life is extended. From the beginning of the world up to our day, patients like these would have been abandoned to their fate; but thanks to the genius of Hunter, and the intrepidity and dexterity of modern surgeons, the span of existence under such circumstances is now prolonged, and death, for a season is robbed of his victims.

If such be the improvement in one great department of the healing art, our attention is naturally turned to the other, and the question immediately presents itself, has an equally beneficial

change taken place in that also? Is the curative power of medicine as much extended as that of surgery? The reply, I fear, must be in the negative; and if so, we cannot but ask ourselves, how has this happened? Why have not the physicians kept pace with the surgeons in meliorating the condition of man? In solving this inquiry, it is but fair to observe in the first place, that the task of the surgeon is comparatively easy. Of the maladies which he has to treat, by far the larger portion comes under the cognisance of his senses; his eye and his finger are most efficient aids; whereas the medical prescriber is, to a great extent, deprived of these facilities, and must rely upon inferences rather than perceptions.

In the next place, surgical complaints are much more uniform than diseases strictly medical. In the former, there is little scope for the operation of those perturbing causes to which I have elsewhere* alluded, and which in the latter, are perpetually modifying results in a manner which to us is altogether inscrutable. Hence the experience of one surgeon is a much surer guide to his brethren, and may be much more implicitly relied upon than the observations of a physician, supposing both to be equally desirous of stating the truth; and what is more uncommon, supposing the perceptive powers of both to be equally unperverted by preconceived opinions and hypothetical notions.

But after making all these allowances, it must still be acknowledged, that medicine has been less successfully cultivated than surgery, and the question of course recurs, whence this relative inferiority? I say *relative inferiority*, because I acknowledge that the improvement in medicine has not been small, though far less than in surgery; whence then the difference? It has arisen, I conceive, in this—the surgeons with a plainer path before them, have not disdained the line and plummet of sound philosophy; in other words, "They have experimented with caution and observed with care, and from facts thus ascertained, have deduced the conclusions which they warranted." Take the very disease, aneurism, of which we

* Vide page 172 of this volume.

have been speaking as an example. Mr. Hunter having probably observed, that the main artery of a limb is sometimes obliterated spontaneously and sometimes destroyed by accident, and yet the member did not perish for want of a due supply of blood, determined to try the effect of tying such vessels when affected with aneurism. The event was favourable, and from that point surgeons have proceeded until they have attained the splendid results already mentioned. And how have the physicians acted? Why with a preposterousness almost inconceivable, they have entirely reversed this the procedure of the surgeons. Because their footing was unstable, they have been heedless; because it was dark and uncertain, they have been rash and confident; and because their steps were beset on all sides with responsibilities the most awful, they have but dashed on the more recklessly, plunging without chart or compass into oceans of conjecture and hypothesis, and pursuing phantoms which have forever risen and forever faded upon their eager and deluded sight. But enough of these follies. Relief is at hand. The march of common sense is manifest; and I look forward to the day when the dominion of philosophy and right-reason will be as absolute in medicine, as it has already become in all the other departments of human knowledge.

The progress of surgery then has never been retarded by physiological systems, as they are sometimes called, or the happy process of advancing *from* that of which we know nothing, *to* that of which we likewise know nothing. This mode of progression, I may remark, must necessarily be adopted by all those who are determined to explain every thing in the animal economy. For there are many parts of the human system whose uses or modus operandi are at present altogether unknown, and there is a yet greater number of phenomena of which the causes are involved in equal obscurity. These obstacles, so long as they subsist, are of course insuperable to every one who thinks an observance of the rules of philosophising of any importance in the discovery of truth. Not so our theorists however. To them this state of double ignorance has proved the most convenient thing ima-

ginable. *It has enabled them*, after their manner, *to find employment for every discoverable organ, and to furnish a solution for every conceivable difficulty.* The means by which these ends are accomplished, are two-fold. The first consists in assuming the facts from which the conclusion is to be drawn, and then from the conclusion establishing the facts, which like all arguments in a circle, proves any thing or nothing according to the acuteness and disposition of the reader.*

The second plan consists in the use of the argumentum ad ignorantiam. It is thus applied. Suppose inquiry be made of one of these theorising gentlemen, what purpose does any particular portion of the terrâ incognitâ of our bodies subserve? He answers, such and such are its uses or modes of action, according to the peculiar notions, whatsoever they may be, which he has to support. Very well, the querist rejoins, all this is very well, provided you can prove it. Prove it! exclaims the man of notions, Prove it! *Why if such be not the use of the part in question, pray what is its use?* If on the other hand, the cause of some phenomenon be required with regard to which he is just as wise as he was on the former occasion, he refers it with the greatest complacency and confidence to some viscus, of which little or nothing is known. Most commonly the nervous system is selected on account of its extent, importance, and our profound ignorance of the manner in which its functions are performed. But whatever part may be chosen, the same argument, *mutatis mutandis*, is had recourse to—if such be not the cause, use, &c. pray what is it? And such is the reasoning upon which human life and human comfort have been made to depend!

But from all such follies Dr. Post was entirely exempt. His cool† and clear head was not to be disturbed by " words

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* Could every person who undertakes to put forth new notions in medicine, be required to prove his premises before he proceeded a step further, what an infinity of discredit to the profession, and mischief to the public would be saved!

† To ordinary observers, Dr. Post's moral temperament bore the same stamp with his intellectual powers. But however cold in appearance, he

without knowledge." Untrained, indeed, in the schools, he had that sound sense which no training can give, and which renders such training, so far as the individual is alone concerned, in a great measure unnecessary. And this brings me to the second head of my discourse—the intellectual character of Dr. Post—a character little apt to be appreciated as it merits by the world at large. For in this age of noise, bustle, show and glitter, something striking is always required, and if there be nothing to dazzle, many infer there is nothing to admire. Accordingly, it has been more than once observed to me, that Dr. Post was not an extraordinary man—nothing uncommon. No? How did it happen then, that at the age of twenty-three he was a lecturer on anatomy; that for nearly thirty years he was at the head of his profession in this city, and now that he is gone, not only is there no one prepared to succeed him, but we cannot even designate the person who is ultimately to fill his high and lucrative station? Why do not some of those who consider Dr. Post as so very common a personage, step into the place which he has vacated? The inducements are ample. Honour and emolument on the one hand, and the esteem and confidence of his fellow-citizens on the other, await the successful aspirant. Yet he appears not. Will it be said, that these things come by chance—that Dr. Dr. Post was *lucky*. Let no man thus solace his vanity. Every one may rest assured, that events are no more fortuitous in the moral than they are in the material world, and that in the one as in the other, every effect has its appointed and apportioned cause. To great permanent success then, though other things be requisite, corresponding abilities are indispensable. I say *permanent* success, because I acknowledge that

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had a fund of feeling, not lying upon the surface indeed, though when touched, of the warmest character. This feature I had suspected from some incidents which I had myself witnessed, and my conjecture was confirmed by a gentleman whose opportunities of knowing Dr. Post intimately were more ample than mine. That gentleman remarked to me, that in the chamber of death, under circumstances of unusual and deep distress, he had seen Dr. Post cry like a child.

by puff and parade, by sounding his own praise and by hiring others to "swell the note," a man may acquire a certain kind of notoriety. This is particularly easy in medicine, from the acknowledged incompetency of the public to judge of medical men. But this mushroom-fame never lasts. In the end justice is sure to be done, and mankind, though imposed upon for a time, finally reduce the vain pretender to that obscurity from which he so improperly and frequently so surreptitiously emerged. Now whatever may be thought of Dr. Post in other respects, here all will concur. All will concede that no man ever existed who had less recourse to fictitious or nefarious aids to bring himself into notice. No newspaper paragraphs announced his cases or his cures. No bawling sycophants proclaimed the wonders which he wrought, to raise a reputation on which they might subsequently batten. Precisely the reverse of all this was the fact. Every thing connected with Dr. Post was quiet and unobtrusive, perhaps retiring, and his success, as we shall see, was the result of very different causes.

I have already stated that he was for nearly thirty years at the head of the profession in this city. Now to acquire and maintain that station, two things are necessary—the confidence of the public, and the good opinion of the faculty. To obtain the former, mere ability will, in a great degree suffice; but to secure the latter, something further is required, virtue must be superadded, a flaw in the heart being here as fatal as a defect in the head. For so extremely delicate is the nature of the intercourse which takes place between medical men and their patients, and so easily and with such apparent security and advantage can propriety in this respect be violated, that a man if unrestrained by strong moral principle, infallibly does wrong. Sooner or later, however, his offence is detected; the offender is then opposed by his brethren, and if he persist, he is finally scouted from their ranks. But so unlimited was the confidence of, I believe, every practitioner in the city in the honesty of Dr. Post, that no patient could be more anxious to receive the benefit of his advice than the attending physician was ready to meet him in consultation.

Does not this at once explain what to some appeared so marvellous, the success of Dr. Post? Where is the mystery now? The public appreciated his talents, and the profession relied on his virtues. And what renders Dr. Post's character in this respect the more praiseworthy, is this, that while perfectly correct himself, he well knew how to rebuke and to punish any medical man who should infringe, with regard to him, those rules of good conduct and gentility which should regulate medical intercourse. Were the plan adopted by Dr. Post generally pursued, of arraigning, exposing, and denouncing at the tribunal of the profession, offenders of this description, there would, I am sure, be more harmony in the profession; since fear would then constrain those whom principle could not govern. I may observe, that the anecdote on which the foregoing statement is founded, I had from Dr. Post when on a visit to this city in the year 1819. His narrative impressed me forcibly with regard to the energy and decision of his character—qualities not often called forth in a man so cool, correct, and dignified as himself.

While on this part of my subject, I cannot avoid the gratification of mentioning the good understanding which always subsisted between Dr. Post and myself. At first in opposition, then joint professors, and lastly, independent friends; no hostile feelings were at any time manifested with regard to each other, nor did any, I am persuaded, ever exist. And now, by a train of circumstances the most singular and unexpected, it has fallen to my lot to hold up, however feebly, to the just admiration of his fellow-citizens, the only man with whom, in the whole course of my life, I have come into any sort of collision, whose talents and whose station could for a moment induce me at least to consider him as a rival. This may savour of pride. If so, I hope it is of honest pride; and the sentiment, if a compliment to the living, I have reason to believe was esteemed no reflection by the dead.*

* Speaking of Dr. Post to a most esteemed friend when on my way to the south in 1814, I expressed what I have stated in the text. Circumstances have caused me to think that the remark reached the ears of Dr. Post, and that it was not disagreeable to him.

I have thus, Mr. President and Gentlemen of the Society, brought to a close my remarks upon the life and character of Dr. Post. From the account which I have given, two useful lessons may, I think, be deduced. First, that Fortune is not so capricious in her favours as many imagine; and secondly, to secure those favonrs, in other words, to attain the success of Dr. Post, we must first acquire his skill and tact, and, what is perhaps more difficult, certainly more rare, we must practice these qualities with his steadiness and virtue.

Before I conclude, it is proper for me to observe, that our profession is sometimes charged with want of attention to religious duties. How far this remark is well founded, I need not inquire. It certainly did not apply to Dr. Post, who I am assured, bowed to the fatal mandate in that frame of mind which becomes beings so frail and imperfect as ourselves.

Such then was Dr. Post as a man, a physician, and a christian; and I have only to add, that at the final adjustment, may we all be gathered where there is reason to hope that he will be garnered.

P.S. Some gentlemen, whose opinions the author highly respects,have represented to him, that the phraseology which he has permitted himself to employ, with regard to medical theorists, to whom alone his observations apply, is too strong. This may be so. But the author has so often seen and so keenly felt the mischiefs resulting from the propagation of unfounded and hypothetical notions in medicine, thas he has perhaps unconsciously acquired a morbid sensibility on the subject. Truth however, and particularly general truth, when promulgated with good motives, and with a just hope of producing good results, cannot surely be condemned, even though it be couched in language somewhat warm. Does the author then expect, he has been asked, that "good results" will ensue from what he has done? To this inquiry the author has replied, that the spirit of reformation is abroad in medicine as well as in every other department of human knowledge, and indeed in every other avocation in which mankind is

engaged, and that he flatters himself he may accelerate a current which already sets, however feebly, in favour of sound medical principles. For the rest, the author is well aware that to attempt, nay, to aid a reformation, no matter what the subject to be reformed, is so certain to excite displeasure, that the task will never be attempted by him whose love of present applause is stronger than his sense of duty.

With these remarks the author takes his leave of medical theorists, adding, however, that his friends have suggested to him, that he himself from his propensity to generalize, is obnoxious to his own censures. If such be the fact, the author only adds one to the long list of those whose precepts have been better than their example, and he sincerely hopes that his brethren of the profession will profit by what is right, while, more fortunate than himself, they eschew what is wrong.

One further remark and the author will conclude. He takes it for granted that the statements contained in his address are essentially correct, because in that particular he has not heard them seriously impugned. His alleged fault is altogether different, and consists not in stating propositions which are erroneous, *but in making acknowledgments, which however well founded, are deemed derogatory to the profession.* Upon this point a solitary observation shall suffice. Such is the reliance of the author upon the value of medicine as a means of alleviating many of " the ills that flesh is heir to," and such is his opinion of the virtue and abilities of many of those who practise the profession, that he is at all times willing the profession itself, and these its practitioners, should stand revealed before the public, in the full confidence of their strength, assuming nothing which is false, concealing nothing which is true; and let him whose sensitiveness has been ruffled, proclaim his higher and juster views.

PARK PLACE, 14th October, 1828.

ART. II. *Notice of the late* WILLIAM HANDY, M.D. of New-York.

DIED in this city, September 22, 1828, William Handy, aged 62 years. He was born in Newport, Rhode Island, Sept. 21, 1766. After the usual preparatory study, under the late Dr. Isaac Senter of that place, he went to Europe in the autumn of 1785. He attended the different courses of lectures in the University of Edinburgh for the three succeeding sessions, and graduated as M.D. in June 1788, when he defended an inaugural dissertation, "De Fœtus humani nutrimene." After the completion of his collegiate studies, he passed over to the continent of Europe, and embarked from Copenhagen in Denmark for India, and did not return to his native place until the year 1790. In 1791 he began the practice of physic in Charleston, S. C., and was soon after appointed the resident physician of that city. This office he held until the death of his father, in 1794. On that occasion he was compelled to return to his native place, and his attention became therefore directed to other objects, which interfered with the immediate duties of a medical practitioner. Being thus engaged, he made a second voyage to India, and afterwards retired to a farm at Grotton, in the neighbourhood of New-London, Connecticut. In 1807 he resumed the practice of physic, which he pursued for several years afterwards in this city. In 1817 he was appointed by the Governors of the New-York Hospital, physician to the Lunatic Asylum, and continued to perform the arduous duties of this station, in this and the succeeding year, until ill health compelled him to resign the office. It was his custom, during this period, to record the most interesting cases that occurred in that institution; and had his connection with it continued, it was his intention to have pursued this object with the same fidelity and accuracy with which he began it. His conduct here claimed the decided approbation of the Governors of this charity; and it may with great truth be averred, that through the whole period of his medical career, both at Charleston and New-York, his deportment to his professional brethren and to the

sick entrusted to his care, was such as to command universal respect. His judgment was clear and discriminating—his duties were fulfilled with conscientious rectitude. An exact period of sixty-two years intervened between his birth and his death, and more than forty years had elapsed from the period of his graduation. For some time previous to his dissolution, his health had been greatly impaired, and he was perfectly resigned to his fate. Among his collegiate associates, are now to be reckoned some of the most venerated members of the medical profession. W. H.

QUARTERLY HISTORY

OF

IMPROVEMENTS IN MEDICINE AND SURGERY.

Foreign.

ANATOMY AND PHYSIOLOGY.

An Account of a New Method of Embalming, and of Preserving Subjects for Dissection. By Sir G. S. Mackenzie, Bart., F.R.SS. L. and E., &c. In a Letter to Dr. Christison.—Sir,...Although still engaged in attending to experiments connected in some degree with the subject of this communication, the results of which may be beneficial to myself, as well as to the public, the preservation of dead bodies for dissection has become a matter of so great importance, that I feel I should do wrong were I to withhold any longer from the medical world such results as I have already obtained. As the discovery of a new method of embalming prompted me to attempt discovering means to preserve bodies in a state fit for the dissecting-room, I will proceed to describe it first; for, though it is needless to detail all the steps by which I advanced to what is in effect exceedingly simple, still it is proper to exhibit the principle on which I operated.

The object I was originally in search of was a substance which had a strong attraction for moisture, but no corrosive qualities. From previous observation I conceived that *molasses* would answer my purpose. On trying its effect on muscle, I was soon made aware that this article was likely to become more valuable than it has hitherto been, and that it might be applied to something more dignified than the manufacture of ginger-bread. A mass of flesh immersed in it was in a few days deprived of all its juices, and the fibres became rigid. It was reduced into a state resembling pemmican. During the process an acid was produced, resembling the pyroligneous in some degree, and most probably a modification of the acetic. This was made sensible by the taste of the flesh. After I had made many trials, a medical friend in Edinburgh immersed a hand and part of an arm which he had amputated, in thick molasses; and after a few weeks it was converted into most perfect mummy, surpassing any Egyptian specimen I have ever seen. On being removed from the molasses muscle becomes drier; and I have specimens in my possession that I consider as sufficient proofs that bodies, after being immersed in molasses for a sufficient length of time, washed and exposed to gentle heat, and then wrapt in cerecloth or oiled silk, may remain unchanged for any length of time. The power of molasses is such, that I feel assured that disembowelling is not necessary, (unless in cases of dropsy,) injection by the œsophagus, trachea, and rectum, and the introduction of a portion into the abdominal and thoracic cavities, being probably sufficient to preserve every part. Nor should I conceive it necessary to remove the brain; it will be sufficient to give access to the molasses by one or two openings. The molasses should be thick, that is, as free from water as possible, its fluidity being preserved. It acts in two ways, by its absorbent, and by its antiseptic qualities. In all cases in which it is desired to send bodies for interment from a distance, or to prevent unpleasant effluvia, the application of this substance will be found equally, and I believe more effective than the expensive means hitherto employed.

Having observed the complete check given to putrefaction by molasses, I became anxious to apply it in such a way as to preserve subjects for dissection. In its undiluted state it was unfit; and on diluting it moderately with water, I found that with muscle a fermentation was produced, not a very active one, but sufficient for the production of so much of the peculiar acid as seemed likely to endanger the vascular and nervous structures, and even the muscular fibre. Proceeding to dilute more and more, I at last found that by doing so the tendency to fermentation was diminished, but not prevented to such a degree as I wished. I likewise found that it was important to exclude the air; but in attempting to do so there was risk, if gas were extricated, of the vessels giving way. After many trials I was induced to add salt to the solution of molassss; and the result of a trial of four months' duration makes me sanguine in the hope that my object is attained. But from the great scarcity of subjects, I have had no opportunity of making the *experimentum crucis*. I have operated only on

beef and mutton. Such, however, are the results, that I have no hesitation in recommending the following method of preparing subjects for being carried to a distance, or for preserving such as may come directly to the dissecting-room, and are not immediately wanted.

The subject being placed in a cask, let it be filled with liquor made of one measure of molasses, one of salt, and fifteen or sixteen of water. The head of the cask may be put on, having two small holes in it, and after twenty-four hours liquor may be poured in by one of the holes, while any air in the cask escapes by the other, and then both may be plugged up and the cask forwarded to its destination. I have little doubt, if the cask be perfectly tight, of subjects coming in a good state from the West Indies or the coast of Africa. But abundance may probably be got without going quite so far. The specimens I have examined at the end of four months, and which have undergone no unfavourable change, are in a stone vessel closed by two folds of bladder; and I expect that at the end of the year they will be found unaltered. No apparent fermentation has taken place, and no formation of mould or scum, as when the liquor and flesh are left exposed to the air. The parts are quite soft and entire. I have informed Dr. Turner of the means to obtain the peculiar acid for examination.

One thing has encouraged me above all others to proceed; and that is the idea, that, when a subject has been impregnated with the liquor, the poison which proves fatal when an accidental scratch is given by the scalpel will be destroyed. This may be easily ascertained by experiment on some animal. The great distance of my residence from any medical school has retarded my progress. But I now commit the farther prosecution of the matter to those for whose benefit I have hitherto been experimenting, intending to confine myself to another application of molasses, also likely to be attended with benefit. The time has been when anything coming from a scientific amateur would be held in contempt; but I fear nothing of the kind in these days, when anatomy and physiology are reckoned branches of liberal education. I may, therefore, further express a hope, that ere long, by the use of the above liquor, dissecting-rooms will be entirely freed from all disagreeable smells, and the air of hospitals rendered salubrious. The latter by means of some of the liquor or diluted molasses alone being poured into all utensils for receiving *ejecta*, the effluvia from which propagate disease, as well as retard the recovery of patients. Nor is it unreasonable to hope that some trials will be made of the administration of molasses internally, and of its effects applied externally.

The specimen of mummy referred to above is in the possession of my friend Dr. A. Combe. I am, Sir, your most obedient servant,

Coul, 5th May 1828. G. S. Mackenzie.

Note by Dr. Christison.—I have communicated this letter for insertion in the Edinburgh Medical and Surgical Journal, at Sir G. S. Mackenzie's request. I may add that I have seen the preserved hand in Dr. Combe's possession, and can bear witness to its complete momification. It was

made last August, and no pains whatever have been taken to exclude the influence of the causes which promote putrefaction; yet it is not in the slightest degree decayed. 22d May.—*Edin. Med. and. Sur. Journal.*

Cold Injection for Anatomical Preparation.—If a mixture of varnish and vermilion has a small quantity of water mixed with it, it soon sets and becomes hard. This affords an excellent composition for anatomical injection, being very beautiful and very penetrating, (so much so, that it frequently returns by the veins,) and requiring no heat to be applied to the subject. The writer of this article frequently had, in the course of his medical education, the office of preparing this injection, of which he has, however, unfortunately forgot the proportions, and the particular nature of the varnish. It was, he thinks, a spirit varnish; the water was not mixed until the instant the injection was wanted, when it was well worked up with the syringe, and immediately thrown in; in the course of a night it would have set beautifully. This particular kind of injection was invented by an American anatomist of the name of Ramsay, and preserved as a valuable secret by him for the exclusive use of his own dissecting-room. The proportions, &c. of the ingredients will soon be attained by a few experiments.—*Brande's Quar. Journal.*

On the Mechanism of the Act of Vomiting. By MARSHALL HALL, M.D., F.R.S.E., &c. &c.—Two opinions have divided physiologists respecting the nature of the act of vomiting. It was originally and long thought that this act consisted simply in a sudden and forcible contraction of the stomach itself.* Afterwards Bayle, and Chirac, and more recently M. Majendie, considered that the stomach is inactive, and evacuated by being subjected to pressure by the simultaneous contraction of the diaphragm and abdominal muscles.

It appears to me that neither of these opinions is correct. M. Majendie distinctly proves by actual observation, and by the substitution of a bladder in the place of the stomach, that the contraction of this organ is not usually subservient or necessary to the act of vomiting. I refer to the interesting paper† of that eminent physiologist for the more full elucidation of this first question. I proceed to state such observations as appear to me to controvert the second, and to establish that view of this subject which I have myself been led to adopt.

It is obvious that, if vomiting were effected by a contraction of the diaphragm, it must be attended by inspiration. If this were the case, the fluids ejected from the stomach would be drawn into the larynx, and induce great irritation, events which are not observed. These events are, indeed,

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* Such was the opinion of the great Haller.

† Mémoire sur le Vomissement, par M. Majendie. A Paris, 1813.

effectually prevented by an accurate closure of the larynx, a fact observed in an actual experiment by M. Majendie, who makes the following observation:—"Dans le vomissement, au moment où les matières vomies traversent la pharynx, la glotte se ferme très-exactement."* It is astonishing that this observation did not lead its acute author to see that under such circumstances, a contraction of the diaphragm, unless the thorax followed precisely *pari passu*, was impossible.

Complete vomiting has been observed, too, in cases in which the stomach had entirely passed through a wound of the diaphragm into the thorax, and in which it could not, consequently, be subjected to the action of that muscle.† In some experiments, vomiting was observed also to take place, although the diaphragm had been paralysed by a division of the phrenic nerves, or its influence subtracted by a division of its anterior attachments.‡

This view of the subject is still further confirmed by facts, which I now proceed to state, which prove that the act of vomiting is an effort, not of inspiration, but of expiration. This is obvious enough, indeed, on a mere observation of the state of the thorax and abdomen during vomiting. The larynx is evidently abruptly and forcibly closed, the thorax drawn downwards, and the abdomen inwards.

Such, indeed, appears to me to be the precise nature of the act of vomiting, in ordinary circumstances. The contents of the thorax and abdomen are subjected to the sudden and almost spasmodic contraction of all the muscles of expiration, the larynx being closed so that no air can escape from the chest, and the two cavities being made one by the floating or inert condition of the diaphragm. The mere mechanism of the act of vomiting differs little, therefore, from that of coughing, by which, indeed, the contents of the stomach are frequently expelled: the larynx in the former is, however, permanently,—in the latter, only momentarily closed; and there is, doubtless, a different condition of the cardiac orifice and of the œsophagus.

It appeared to me from these views of this subject, that if an opening were made into the trachea, or through the parietes of the thorax, the effort of expiration constituting the act of vomiting, would issue in expelling the air through these orifices respectively, and the evacuation of the stomach would be prevented; and I determined to submit the fact to the test of experiment. I took a little dog, made an ample opening into the windpipe, and gave a few grains of the sub-sulphate of mercury. The

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* Mémoire sur l'Usage de l'Epiglotte dans la Déglutition, p. 3, note.

† Such a case is mentioned by Wepfer. A similar one was also recently witnessed by Dr. Webster and Mr. Hunt. The whole of the stomach was found in the thorax, having passed through a wound of the diaphragm. There was repeated vomiting of a substance resembling coffee-grounds.

‡ Œuvres de Car. Legallois. A Paris, 1824, tom. ii. p. 104.

animal soon became sick. The first efforts to vomit induced a forcible expulsion of air through the orifice in the trachea. These efforts soon became very violent, however, and the stomach at length yielded a part of its contents. It was perfectly evident that the violent contractions of the abdominal muscles pressed upon the viscera of the abdomen so as to carry the diaphragm upwards to its fullest extent, and that at this moment vomiting was effected. The act of expiration was so forcible, that a lighted candle placed near the tracheal orifice was several times extingusihed. In a second experiment, a free opening was made into the thorax between the sixth and seventh ribs of the right side. The lung collapsed partially only. During the first efforts to vomit, air was forcibly expelled through this orifice, the lung was brought almost into contact with it, the stomach was not evacuated. But as the efforts to vomit became extreme, a portion of lung was driven through the thoracic opening with violence and a sort of explosion, and at the same instant the stomach yielded its contents. These experiments appear to admit only of one explanation, of one conclusion,—that the act of vomiting is a forcible expiratory effort, the larynx being firmly closed, and the diaphragm perfectly inert.

It must be regarded as singular that M. Bourdon, by whom the action of the expiratory muscles, in their various "efforts," has been so well investigated,* should have adopted other views of the act of vomiting.

It is not intended to state that the act of vomiting is simply such as I have described. There are many facts which appear to show that the œsophagus is not without its share of influence in this act, and it is plain that the cardiac orifice must be freely opened; for mere pressure upon the viscera of the abdomen will not, in ordinary circumstances, evacuate the contents of the stomach. To effect this open state of the cardiac orifice, it is probably necessary that the diaphragm should, indeed, be in a relaxed rather than in a contracted state.

A singular and interesting fact was noticed by M. Majendie, of which he has not given any explanation. During the state of nausea which preceded the act of vomiting, in some of his experiments, air was drawn into the stomach. I am disposed to think that this effect was produced in the following manner: the larynx being closed preparatorily to the act of vomiting, an attempt at inspiration is made before the effort of expiration. In this attempt, air is drawn into the œsophagus, the larynx being impervious, and it is afterwards probably propelled along that canal into the stomach itself. It is not improbable too, that in some instances of vomiting, in which the action of the abdominal muscles was subtracted,† a similar effort of inspiration has drawn substances from the stomach into the œso-

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* Recherches sur le Méchanisme de la Respiration, &c. Par Isid Bourdon. A Paris, 1820.

† Œuvres de Legallois, tom. ii. p. 105.

phagus, which has eventually expelled them by an inverted action. Neither of these phenomena could result from any action of the diaphragm, and much less from contraction of the abdominal muscles. But it is easy, by closing the larynx and attempting to inspire, to draw air into the œsophagus. A similar act, if very forcible, might draw a portion of the contents of the stomach through the cardiac orifice.

Such then appears to be the nature of the act of vomiting. How different is this act from one in which the diaphragm does, indeed, contract suddenly, under similar circumstances of closure of the larynx, viz. singultus: the action of the diaphragm being an effort of inspiration, air is apt to be drawn into the œsophagus with considerable noise; and there is occasionally pain, not only about the insertions of the diaphragm, but about the closed larynx.—*Brande's Quarterly Journal.*

MORBID ANATOMY.

Instance of Obliteration of the Aorta opposite the Fourth Dorsal Vertebra. By Professor Meckel.—A peasant, aged 35 years, previously in good health, robust, and well made, was all at once, on the 18th of January, seized with a sense of great debility, while carrying a sack of grain to market. He was carried to the hospital immediately. The symptoms of syncope and vertigo were dissipated in a few hours; to which succeeded gastric irritability, pain in the chest, total loss of appetite, bilious vomiting, the pulse remaining little altered. By the 6th day, the patient appeared to be completely cured—got up and was walking about, but suddenly fell down dead.

Dissection. On opening the thorax, the pericardium was observed to be filled with black blood, occasioned by rupture of the right auricle, which was softened in its structure. The aorta ascendens was found to be too much dilated for injection from that point—and, therefore, ligatures were thrown on the left subclavian and carotid arteries, while the tube was fixed in the arteria innominata. The injection was considered to be unsuccessful, and as the subject had been designed for a demonstration, it was thrown aside. On opening the abdomen afterwards, the vessels were seen injected, as were those of the lower extremities down to the feet. The examination being prosecuted, they found the aorta immediately below the arterial ligament, reduced to the size of a crow-quill, while a beautiful network of vessels were seen between the trunks, going off from the arch of the aorta, and the intercostals of the aorta descendens. The said intercostals were very much enlarged, and had produced grooves in the ribs. From this circumstance it was inferred, that the obliteration of the aorta was an affection of long standing, and could not possibly have dated from the late attack of syncope, six days previously. The man must, therefore, have not only survived the cause of the obliteration, whatever it was, but lived in good health for many years afterwards. On inquiry, all that could be learnt was, that this man had been very often ill in his youth; but afterwards had grown up strong and muscular.

Mr. Syme's Case.—When on the subject of obliteration of arteries, we may here notice a case recently published by Mr. Symes. An unhealthy man, aged 58, had been seized with mortification in the left leg, without any apparent cause, and where nothing but amputation appeared to present any chance of success. The limb was removed above the knee, and on examination, the popliteal artery was found firmly obstructed by a dense white coagulum, like that lining old aneurisms, and this obstruction continued all the way to its division into the peroneal and tibial arteries, which were also obstructed to the extent of an inch and a half from their origin, beyond which point they were healthy. The obstructed vessel seemed also to be somewhat contracted, particularly about the middle of the popliteal portion, where its coats were thickened. The vein was much thickened, so as to resemble an artery, but not obstructed. The man did well for some days, and half the stump was healed. But the breathing became oppressed, and he died. On dissection, the heart was found so soft and flabby, that the fingers could be easily pushed through its substance. The *right* internal iliac artery was firmly obstructed from its origin, as were the right and left internal iliac veins. Mr. Syme's opinion of the case is, that it was one of acute inflammation of the arteries, similar to the one recorded by Mr. Hodgson.—*Med. Chir. Review.*

Open Foramen Ovale in the Adult.—A young man, aged 18 years, was admitted into the Hardwicke Hospital, on the 6th Feb. 1827, as a fever patient, showing thoracic inflammation, with cough, difficult breathing, and bloody expectoration. By depletion he was rendered convalescent by the 14th, but on premature exposure to cold, he was seized with acute rheumatism, which became ultimately translated to the chest, especially to the heart, where great distress was felt. The more acute symptoms were allayed by active depletion; but on the 27th Feb. we find the patient with pain in the region, severe cough with croupy sound—copious muco-purulent expectoration—great difficulty of breathing. He now stated that he had been subject for some years to pain in the left side, especially after running, or any active exertion. The pulse was rapid and irregular—countenance pale—feet œdematous. "The stethoscope indicated acute bronchitis, with hypertrophy, and disordered action of the heart, the motions of that organ being tumultuous and irregular." He lingered till the 10th of March, when he expired.

Dissection. "The thoracic cavity was examined on the 12th. On opening it the lungs did not collapse, but the external appearance of this organ was healthy; the parenchymatous tissue exhibited some portions red, congested, and evidently inflamed; the bronchia vascular, and filled with a muco-purulent effusion.

"Pericardium contained about two ounces and a half of fluid, in which a considerable quantity of coagulable lymph was seen; inner surface of this membrane not inflamed, but that portion of it which is reflected over the heart showed marks of inflammation in several places; both ventricles

were much enlarged, exhibiting considerable hypertrophy; the semilunar aortic valves showed recent fleshy or *cauliflower* excrescences attached to all of them. Both the ventricles were quite filled with a dense, white coagulum, firmly attached to their parietes. The commencement of the aorta appeared unusually narrow, in proportion to the heart and to the subject; that of the pulmonary artery greatly enlarged. The auricles of the heart were also in a state of considerable dilatation: but the circumstances which attracted attention most, was, that the foramen ovale was open; but the manner of this opening must be more fully described. The septum between the auricles exhibited an oval depression, or attenuated space of about one-third of an inch in diameter, guarded only by a thin membrane; but at one side it was evidently pervious and open, with a rounded and thickened edge. This membrane acted like a curtain or valve; when viewed or pressed from the left auricle it was closed, the curtain or membrane pressing close, and overlapping the opening; viewed from the right auricular cavity, or touched with a probe, it opened and allowed a free passage, fully as large as a goose's quill, compressed so as to exhibit an elongated or oval section. The blow-pipe exhibited the same difference of a closed or open space, as it was used from the left or right side of the auricular septum."

Dr. Crampton enters into a long train of reflections on the consequences which must have resulted from this valvular opening between the two auricles of the heart, including the "dark unrenovated blood,"—the "tumult and distress felt in the heart and respiratory organs, &c." But we see no evidence of this unrenovated blood, before the last fatal illness—nor even then; and as to the tumult and distress about the heart, we attribute *them* to the inflammation resulting from metastasis of acute rheumatism. Dr. Crampton tells us that in such a case as the above, there is only a part of the venous blood sent through the lungs for renovation, a portion going through the preternatural opening into the left auricle, "from whence it is prevented from returning by pressing back against, and closing the valvular curtain already described." We are much surprised at this reasoning. Does Dr. Crampton remember, that the two auricles act *at the same instant*, and not in succession? If the right auricle, indeed, acted while the *left* was passive, some blood might go through the valvular opening into the *latter*—and if the left acted subsequently, while the right was passive, the valve might still prevent the return. But there is no such thing. The two auricles act at the same instant, and both sides of the septum auriculorum are equally pressed, so that even when there is a wide and patent opening, there is very little intermixture of blood, where the heart otherwise preserves its relative proportions and capacities. It is where the strength of the one auricle predominates over that of the other, or where any obstruction to the natural issue of blood from an auricle takes place, that the foramen ovale produces the admixture in question. Thus, supposing there was a contraction of the opening between the left auricle and ventricle, such obstruction might cause some blood to pass through the

foramen ovale, if it remained open. But in a natural and healthy condition of the chambers, we maintain, that such opening would produce little inconvenience, under ordinary states of the circulation. Such appears to have been the case in the above instance. There was no symptoms of blue disease—at least Dr. Crampton has recorded none. This explanation accounts for the occurrence of open foramen ovale, in people who had evinced no appearance of blue disease during life. In a postcript to this paper, Dr. C. appears to recognise the principle which we have stated—for after mentioning a patient, aged 34, who died in the hospital, and whose foramen ovale was found open, he says, the valve as in the other case, overlapped and protected the aperture, so that no blood was likely to pass, *unless the contracting power of one side of the heart prevailed over that of the other.* This is the view which we gave of the malformation in question, many years ago. The same reasoning applies to unnatural openings in the septum ventriculorum.—*Med. Chir. Review.*

PRACTICAL MEDICINE.

Case of Hydrophobia, treated with Superacetate of Lead. By CHARLES E. JENKINS.—William Thomas Hazlam, a fine young man, aged 22 years, residing at No. 8, Jones'-building, Gower's-walk, White-chapel, by occupation a labourer, had complained for three months previous to his fatal malady, of heaviness in the head, weariness, and constant propensity to sleep, which he attributed to having caught cold.

On Saturday, November 4th, in the afternoon, he complained of being ill, refused to take his tea; and at thirty minutes past eleven o'clock, first discovered an inability to swallow fluids, which he ascribed to flatulence, which, meeting the descending liquid, would not allow it to pass into the stomach.

He continued getting worse in this respect until eleven A. M. November 5th, when I first saw him. I then found him dressed, sitting by the fire: he complained of wind in the stomach, and lamented his incapability of swallowing liquids. In reply to the question, whether he felt pain, he said, "I am in no pain whatever; I can eat a crust of bread as well as ony one in the room, but I can't drink: my throat is not sore, and I don't know why I can't swallow." Pulse eighty; tongue furred, dry and parched; bowels regular; skin moist.

Two P. M.—Now the peculiar symptom, before only suspected, showed itself in all its characteristic intensity: on the instant of his attempting to take any liquid, to which he was constantly incited by the most tormenting thirst, a frightful convulsion of the whole body succeeded. He was now in bed, and had rolled the bedclothes round him, and girted them tight round his neck. The least breath of air, the undulation of the bedclothes (unless caused by himself,) or the slightest thing in motion, produced the utmost agony and terror.

Four P. M.—Being considerably worse, Dr. T. Davies of New Broad-

street was called in at the patient's request, who recommended (the exhibition of liquid medicine being impossible,) a trial of the Plumbi Superacetas in substance, in doses of half a grain every half hour: this the patient managed pretty well, by placing the powder on his tongue himself, but he would not suffer any other person to attempt it for him; and even this simple method of receiving the medicine was followed on every occasion by a slight paroxysm, as soon as the powder touched his tongue.

Six P. M.—The disease greatly aggravated. Pulse 130; mouth still parched; thirst incessant, beyond any thing I ever witnessed before; he continually cried "Oh that I could drink quarts." His countenance expressed fear and horror, combined sometimes with fury, at others with the saddest melancholy.

Nine P. M.—Found him sitting on the bed, supported by two attendants, of whose breathing on him he continually complained. He would not suffer the candle to approach him, or to be moved. The sight of a sheet of white paper distressed him exceedingly. A small mirror being shown him, threw him into strong convulsions: on his recovery, being questioned as to the cause of them, he replied, "Because my face looks so white, I can't bear it."*

He had drilled his two attendants into a sort of military observance, and this was the order of it: they holding him under each arm, the one held a tea-spoon containing a little milk, which, when the patient gave the word "Now," he endeavoured to throw into his mouth; but the moment it approached his lips, he threw himself backwards on the bed in the utmost agony of convulsion, which lasted generally twenty seconds. A tranquil interval of ten seconds succeeded; then suddenly and furiously he would cry out "Ready!" which meant that they were to raise him up again. After a few seconds, in which he strained his courage to another dreadful effort, the word "Now" would be repeated, the spoon again approach his lips, and the convulsions as certainly follow. This process continued without intermission or variation until four o'clock. In one of his tranquil moments he said, "I don't know what you think of it, but I call this killing work."

Eleven P. M.—His mouth, which had throughout continued parched, began to discharge saliva in abundance, which he blew forth with convulsive energy. He showed a mischievous inclination to blow his saliva upon the persons present: this he would apologise for in his calm intervals, and with a bitter smile, would request them to "keep out of the way next time."

A tendency to vomit, perhaps occasioned by the Plumbi Superacetas, disturbed him; spasmodic action of the abdominal muscles also frequently occurred.

It was a distressing operation to him to wipe off the saliva which col-

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* His face at this time was flushed.

lected about his mouth, and annoyed him very much. After many fruitless attempts, he would pass his handkerchief over his lips with the rapidity of lightning, but the convulsions, ever at hand, still more swift, would at the slightest contact, inevitably follow.

A small portion of wine, not exceeding the third part of a tea-spoonful, having in the only felicitous attempt I witnessed, passed into his mouth, elicited from him loud exclamations of joy: "Oh! (said he,) how that drop of wine has comforted me! I shall be cured now; I feel myself a new man!" But this calm was of only three minutes' duration; and the longest interval he enjoyed was succeeded by a fearful exacerbation. Pulse 140, very small; body drenched in constant perspiration; face red and swollen.

This state of things continued, the paroxysms equally distinct and frequent, but weaker, until four o'clock, when all convulsions ceased, and he died about five o'clock, so easily that his attendants knew not the precise moment of his death.

A very strict inquiry was made by Dr. Davies and myself into all the circumstances of his life. His father and mother declared he had never been bitten by any animal during childhood; and he as strenuously denied it on his own part, and continued to do so until two hours before his death, when he confessed to his father that a dog kept by his master had, nine months before, bitten him in the instep, thigh, and hand. Being questioned as to the cause of his obstinate denial of the fact, he said, "If I had told those Doctors the truth, they would have caused me to be put to death."

This was not the language of unhinged reason, but a mere expression of a vulgar opinion, which obtains with some, that a hydrophobic patient may be with impunity destroyed.

During the whole progress of the disease, he felt no pain; his reason never deserted him; he had a craving appetite, but notwithstanding his assertion that he could eat a crust of bread, I never found that he could suffer any thing to pass his lips: his whole frame, like a highly charged electrical battery, required but a touch to be thrown into sudden and violent action.

Distant sounds did not affect him. In the room he would not allow conversation, though carried on in the lowest whisper. All white and shining bodies were held by him in utter abhorrence.

I have not been able to discover whether the dog had ever exhibited any rabid appearances: he is dead, having been starved by the neglect of the deceased, who had the charge of feeding him.

Examination of the body.—Externally: discovered a scar on the inner part of the left leg, corresponding with his statement to his father of one of the bites of the dog, across which branches of the saphena nerve extended themselves. The nerve presented no remarkable appearance.

Brain: Dura mater very adherent. Veins of the surface very much distended. More bloody points than usual in cutting the medullary sub-

stance. Ventricles nothing remarkable. Plexus choroides unusually pale. Serous fluid at the basis about two drachms. Under the tongue, nothing unusual.

Larynx and trachea red; fine vessels, in arborescent forms, extending down the latter; much light brown spumous serosity in the trachea.—Lungs and heart healthy.—Pharynx very red; redness suddenly ceasing at the commencement of the œsophagus, which latter presented a healthy appearance.

Stomach: Small quantity of fluid; arborescent redness, but not considerable, of the great cul de sac of the stomach.

All the intestines perfectly healthy.

Queries.—1st. May not the nerves be endued with a power of absorption?

2d. May not hydrophobia be produced by nervous absorption?

3d. May not the absorbent power be exceedingly slow, proceeding step by step until the morbific matter arrives at the spinal marrow or brain, when the disease makes its appearance?

It is observed of painters, that after using the brush a considerable time, a portion of lead constantly insinuating itself between the handle of the brush and the hand, that they become paralytic; but two years of constant exercise in painting is, as I am informed, the earliest period at which that disease manifests itself. This, I submit, cannot be accounted for either by venous or lymphatic absorption.

4th. If the foregoing positions could be proved, would they not lead to this practical result, that after the bite of a rabid animal, dividing the nerve supplying the part bitten, by cutting off the communication with the nervous origin, would prevent the disease; and if the slowness of nervous absorption could be established, might it not, even a *considerable time after* the bite, by dividing the nerve some distance from and above the part bitten, be still attended by a corresponding beneficial effect?—*Lond. Med. and Phys. Jour. July*, 1828.

On Diseases of the Spleen.—An elaborate essay on diseases of the spleen, particularly the vascular engorgement of that organ common in Bengal, is contributed by Mr. Twining, which is followed up by an account of the native treatment of diseased spleen by Mr. H. H. Wilson. Mr. Twining is of opinion, that inflammation of the peritoneal coat, or of the substance of the spleen, is comparatively a rare disease in Bengal, since the evidences of it are not found on dissection.

"Among the morbid appearances which are most frequent, we observe, 1st. A soft enlargement, resembling a great clot of blood, wrapped in a thin membrane; this varies in colour from black to brown or blue; and when we attempt to lift the spleen, the fingers are thrust through the membrane, and the organ breaks down in the hands, becoming a putrid gore. 2d. Next in frequency, we find opacities of the peritoneal surface from lymphatic deposit, thrown out during superficial inflammation; or possibly

only the effect of repeated over-distension. 3d. Adhesions of the peritoneal coat of the spleen to contiguous viscera, which adhesions are by no means a general result of tumid spleen in Bengal. 4th. In a few old cases, we find a more indurated friable spleen, that breaks when handled without much force, like a piece of old moist cheese. 5th. And still more rare, is the cartilaginous lumpy hardness to which we give the name of scirrhus." Pp. 362, 363.

The other appearances more rarely observed are in persons long subject to agues,—an uniform pale white or milky colour of the peritoneal coat, which is more than usually tough and wrinkled, while the subject of the spleen is soft and flexible; and in those who are carried off by purging, after having long suffered from diseased spleen, numerous small ulcers are found on the internal membrane of the great intestines, while the peritoneal coat appears either quite healthy, or paler than usual.

We have premised the pathological changes to the symptomatology and etiology of the disease, because they serve as the foundation of all reasoning upon the subject, and discriminate the essential from the accidental phenomena.

Enlarged spleen is a frequent consequence of protracted intermittent and remittent fever, wherever these diseases occur. Great heat is not essential to the production of enlarged spleen. It occurs most frequently when the cold nights set in, after the termination of the rains, or just at the period when concentrated exhalation and considerable diurnal changes of temperature coexist.

"Vascular engorgement of the spleen is characterized by a pale, and often lurid or cadaverous countenance; the *tunica albuginea* of the eye has a pale blue or pearly appearance, similar to that observed in hectic patients; the skin is generally dry, and there is some morbid heat of surface, especially over the belly. There is tumour and tenderness in the region of the spleen, with tension of the epigastrium, which often extends across to both hypochondria. The patient suffers from thirst, though his tongue is generally clean and moist; sometimes it is of a pale and glossy hue, having its surface marked with deep fissures; more rarely it is of a morbid red colour. The stools are generally scanty and frequent, with tendency to constipation; urine pale and copious; the pulse is quick and occasionally hard; appetite indifferent, and digestion imperfect. The debility is greater than would be at first apprehended from observing the size and appearance of the patient.

"Agues frequently return while these symptoms remain, and the hot stage is protracted, and generally peculiarly distressing." p. 355.

"This febrile or irritative stage occurs less frequently than the simple congestion, in which the tumefaction of the spleen is not only greater, but more distinct, because there is less general elastic tension of the belly. There is less tenderness on pressing the spleen. With this condition of the local disease, we find that the pulse is low and weak, face of a pale and lurid colour, tongue clean and moist, skin cool, with a peculiar dry feel,

like a thin satin loosely laid over the soft cellular structure; there is an hectic eye, and pale urine, as in the irritative stage, but less of pyrexia. There is generally more appetite, but assimilation is imperfectly performed, and nutritious food does not restore the strength. Agues relapse more rarely than in the irritative condition, except at the lunar phases, or when the bowels become obstructed, and the cold stage is most distressing from great distension of the spleen." p. 356.

"Either the irritative or the congestive stages of disease before described are occasionally followed by the *indolent tumid spleen*, which is attended with little or no pain on pressing over that organ; while the spleen, though not exceedingly large, is often very hard, and its extent well defined. There is less appearance of debility, more appetite for food, and digestion is more perfectly performed than in the two foregoing forms of disease. In this indolent stage, there is often a dry cough, attended with pain in the left side of the chest, occasionally shooting to the centre of the scapula, or to the shoulder." p. 358.

In females, amenorrhœa is an early attendant in most cases of tumid spleen. Mr. Twining lays great stress upon the influence of tumid spleen upon the function of respiration. He ascribes the black stools not to disordered bile, but to the secretion of carbon from the intestines, to compensate for insufficient decarbonization of the blood by the lungs and skin; and suggests as the subject of inquiry, how far the muscular debility and despondency may depend on the quantity of black or carbonized blood that is collected in the spleen, and thus detained in contact with the great solar plexus of nerves. But we think he goes too far when he attributes the taking away of the breath on descending into the cold bath, and the pains of side induced by violent exertion, to extension of the spleen.

The treatment generally found useful is a steady perseverance in a course of purgative medicines, combined with bitters and some preparation of iron, with a mild and rather abstemious diet. This will commonly succeed in the congestive form. The irritative state requires the application of leeches to the side, or sometimes venesection; and when the febrile symptoms are more than usually urgent, the cure proceeds more favourably when the patients were purged two or three days before the bitters and chalybeates were begun.

Mr. Twining is greatly adverse to the administration of mercury in cases of enlarged spleen; and even considers it very requisite to place some restriction on the habitual exhibition of calomel as a domestic remedy in every disposition of children, and more especially in the sequelæ of protracted fever. The most obstinate and intractable cases of tumid spleen occurred in patients who had previously used mercury; and he strongly combats the opinion of those who consider that enlarged spleen should be treated in the same way as enlarged liver.

A peculiar state of the constitution accompanies the vascular enlargement of the spleen, which renders it unequal to bear the action of mercury without great hazard of inducing alarming debility and depression of vital

power, with tendency to sloughing of the lips, cheeks, and gums, which, when once commenced, generally terminates fatally. He is disposed, however, to think, that after subsidence of an enlarged spleen, when the symptoms of debility have ceased, and the functions of the skin have been restored, mercury may be used without danger.

Mr. Twining says he has given iodine a fair trial in six chronic cases of tumid spleen, and is satisfied that it is of no service in that disease.

The native treatment of a disease so common is worthy of consideration. Their general plan is to apply the actual cautery over the diseased spleen. The patient is ordered a low diet, with injunctions to take but little drink, and to eat no butter, milk, oil, or fat. A mixture of aloes, garlic, and vinegar is given daily, and about a grain of sulphate of iron with each dose. The quantity of aloes is regulated so as to produce three stools in twenty-four hours.—*Edin. Med. and Sur. Journal.*

Memoire sur le Ramollissement de l'Uterus. Memoir on Mollescence (Morbid Softening) of the Uterus. By S. G. Luroth, M.D. [*Hosp. la Maternité.*]—It is only of late years that Mollescence, or morbid softening of the living structures, was discovered to be one of the most important, and unfortunately, one of the most common structural lesions to which the human frame is subject. The brain, the lungs, the spinal marrow, the nerves, the muscles, the bones, the heart, and other parts, have been found in this pathological condition, and have been the subjects of accurate investigation. The uterus is the organ to which we are now to direct our attention.

The mollescence of the womb is more frequently partial than general. It more commonly occupies the internal surface, and the cervix—though occasionally it is found penetrating through the entire substance of the organ. The mollescence presents several *degrees*, blending insensibly into each other. In the first degree, the parts are simply softened or very flaccid, generally with serous, or sero-sanguineous infiltration into the interstices. An example of this kind was observed by our author in the Hospice de la Maternité, in the month of March 1827. A young and strong female had been carried off by puerperal fever, a few days after delivery. On dissection, not only the uterus, which had a large empty bag, but all the other organs, especially those of a muscular structure, as the heart, were in a state of extreme flaccidity. The tissue of the uterus was infiltrated with serosity, and very lacerable. Internally it was lined with a dark-coloured viscid coating, exhaling a putrid odour. The ovaria were softened, flaccid, and infiltrated. The heart was in a similar condition. There are not wanting examples of this kind in works on puerperal fever.

In the second degree, the structure of the uterus is still farther altered. It will scarcely bear handling without reduction into a pultaceous mass. The following is an example observed at the Hospice de la Maternité, under the care of Professor Deneux.

A female, aged 27 years, of good constitution and previously healthy,

was safely delivered of her second child, 4th April, 1827, after a labour of seven hours. She complained of a pain in her side the same day, and was bled, both generally and locally; but some symptoms of pulmonic affection continued till the 17th of the same month, when she complained, for the first time, of burning heat in her throat. The night was passed in great agitation, and on the following day, the tongue was observed to be swelled, and an erysipelatous eruption covered the neck and shoulders. As there were some signs of gastric derangement, an emetic was prescribed, and an oily purgative. On the 19th the patient complained of great general debility, but no local pain. Having exposed herself to cold by throwing off the bed-clothes, the erysipelas disappeared rather suddenly, and was succeeded by diarrhœa, urgent thirst, and cough. 22d. Cephalalgia was added. 23d and 24th. Showed symptoms of low fever; but without any pain or tenderness of the abdomen. She lingered till the 26th, when she expired, never having complained of pain in the abdomen or the uterine region.

Dissection. The arachnoid was opake—many red points in the brain when sliced—no effusion in the ventricles. There was some yellowish serum on the thoracic cavities—lungs sound—heart flaccid. There was some yellowish effusion in the peritoneal cavity, but the peritoneum itself was healthy. The mucous membrane of the cœcum and colon was intensely inflamed; liver enlarged and softened; the uterus was so soft that it would scarcely bear handling, especially its anterior parietes.

In two cases of puerperal fever, our author observed a similar mollescence of the uterus; and cases are quoted from Lippich and Nauman, showing the same conditions.

In the third degree of uterine mollescence, the disorganization amounts to almost a liquefaction, or reduction of the viscus to an inorganic pulp. Generally, this state is only partial—life not continuing till the whole organ is so changed, especially in acute cases. For the most part, the stomach, heart, or other viscera, partake in these mollescences. The tissue thus softened, sometimes preserves its natural colour; at other times it is pale. The parietes of the uterus are more frequently in a state of atrophy than hypertrophy, when they are morbidly softened.

The symptoms of this uterine mollescence are very vague, and but little known, especially those attendant on the invasion of the disease. A sense of weight, or constraint in the pelvis; dull pain in the hypogastrium, augmented by pressure; uterine hæmorrhage; suppression of the lochia (if in the period of accouchement); febrile exacerbations, &c. are the usual accompaniments of this disease; together with a remarkable prostration of the mental and physical powers, and a presentiment, on the part of the patient, that death will ensue. Our author thinks, and the conjecture is rational, that if this disease be going on during utero-gestation, there will be slow and laborious parturition, with probability of a dead fœtus, uterine hæmorrhage, and other accidents attendant on bad labours. It is also not improbable, that mollescence of a portion of uterus may be very accessory

to that dreadful occurrence, laceration of the organ. This last supposition, indeed, is nearly converted into a certainty, by the cases of ruptured uterus put upon record by various authors. The rupture of other organs also, as the heart and stomach, in cases of mollescence of these parietes, is favourable to this supposition.

The progress of mollescence of the uterus is sometimes acute, sometimes chronic. The duration, of course, is very various. It may continue for many years if the affection be partial, and if nothing occurs to hurry forward the disease. Without being able to say any thing decisive as to its comparative frequency, our author thinks that it is a malady by no means very rare. The proximate cause is doubtful—it is not always the same. The mollescence is sometimes a primitive affection—sometimes the effect of other diseases, as of inflammation. In the first instance, it may be owing to a kind of defective nutrition—in short, it may be a kind of atrophy of the organ, unaccompanied by any super-irritation or excitation. There is little doubt, however, that this mode of production is infinitely more rare than that which results from inflammatory action in the part, acute or chronic. Our author is also of opinion, that there is another cause for this mollescence of the uterus, and that is, a putrid or depraved state of the blood itself. Many cases which occurred to him at the Maternité, are in support of this doctrine; but at present, he declines entering farther on this path of investigation.

The prognosis is unfavourable; but more or less so, according to the degree of intensity, and extent of the disease. The diagnosis is very difficult, and must be gathered if possible, from the few symptoms already described. In most cases, the disease is only recognised after death. This, however, was the case in many other diseases now well known by living indications, but formerly undistinguishable from want of investigation. The same observations will apply, no doubt, to the treatment. It must be purely *symptomatical*—that is, the actual phenomena present must be attended to, and combated if practicable. In some cases the disease, when situated about the os, or cervix uteri, can be recognised by manual examination. It is then for us to determine by the existing symptoms, whether it is of an inflammatory nature, or the effect of atrophy, and act accordingly.—*Med. Chir. Review.*

CHEMISTRY.

On the agency of Carbonic Acid in the Decomposition of Water by the contact of Iron.—The last number of Brande's Journal, (No. 6, New Series,) contains an article on this subject by Dr. Marshall Hall. The object of the paper is to prove, that water does not undergo decomposition at an ordinary temperature by the contact of iron, when both are perfectly pure; and that in every case in which water is apparently decomposed by iron, there is necessarily the agency of carbonic acid. In order to establish these positions, the following experiments and observations are detailed.

The bulb of a retort was filled with small portions of iron, and the interstices between them, together with the greater part of the tube of the retort, were then occupied with freshly-boiled distilled water, while a small portion of olive oil was poured into the tube to exclude the atmospheric air. The retort was then placed in an inverted position, and so remained a long time before any chemical change was observed. At length bubbles of gas were seen to ascend to the upper part of the bulb of the inverted retort, and the pieces of iron became tarnished. This effect was observed to take place sooner in a similar experiment in which no oil was poured into the retort, and from which the atmosphere was consequently not excluded.

As these results were supposed to be modified by the influence of a minute quantity of carbonic acid retained by the boiled water in the first experiment, and by a larger quantity absorbed from the atmosphere in the second; in order to neutralize entirely the effect of this substance, a small lump of lime was dropped into the retort without oil. From this moment the evolution of gas entirely ceased, although it had been previously proceeding for many days uninterruptedly.

To determine the agency of the gas still more distinctly, a quantity of iron was first placed in contact with lime-water, and also with water and lime-water mixed in the proportion of four-fifths of the former to one-fifth of the latter. There was not, in either case, after the lapse of a long time, any oxidation of the iron or evolution of gas.

In another experiment the iron was placed in water in which some freshly-calcined magnesia had been mixed. In this case, as in the former, no chemical changes took place.

These experiments were afterwards contrasted by one in which the iron was placed in water impregnated with carbonic acid gas. Here there was a speedy and rapid disengagement of gas, which was proved to be hydrogen by being exploded with a mixture of atmospheric air. A small portion of lime being dropped into the retort, the disengagement of gas immediately ceased.

In some of the experiments in which the greatest pains had been taken to expel the air from the water by long boiling, and to exclude it afterwards, several months elapsed before the slightest evolution of hydrogen was observed; but this eventually took place in all cases in which carbonic acid was not entirely absorbed by an alkaline earth.

It has long been known, that when pure iron is placed in contact with distilled water, which has been freed as much as possible from its gases by long boiling, the decomposition of the water is effected with extreme slowness; indeed, so tardily is this effect produced, that M. Thenard has suggested that it may be an effect of the chemical agency of light. The same author has also suggested, that the decomposition of water by iron may, in some instances, be connected with the evolution of a galvanic action, excited by a circle formed by the iron, a portion of the oxide and the

water. M. Guibourt concludes from a series of experiments made by himself, that iron does not decompose water when in a small proportion to the fluid, but that a decomposition is effected when the relative quantity of the metal is greater.

Such are the views which have been entertained on the subject; but "no person," says Dr. Hall, "appears to have suspected the necessity for the superadded agency of the carbonic acid. That this phenomenon is not dependent upon the agency of light, is proved by the fact of its being totally prevented by the addition of a small quantity of lime-water, or of calcined magnesia. And that it is not an effect of galvanism, is proved by its being prevented or immediately arrested by the same means. It is equally certain, from the same facts, that the relatively large quantity of the metal has no influence upon the result; this is further obvious, from the fact that the water is decomposed, however small the quantity of iron, if carbonic acid be present. In the experiments of M. Guibourts, it is obvious that the carbonic acid was not totally excluded, as it is impossible to deprive water entirely of this gas by the longest boiling."

The experiments here detailed were all made at the ordinary temperature of the atmosphere, at every season, and some of them remained for repeated observation during a year and a half.

In the conclusion, it is suggested that the principles elucidated in this paper, may possibly be useful in the arts, and especially as they may furnish the proper method of preserving polished iron goods free from tarnish or rust, since this object would be effectually attained by covering their surfaces with lime mixed with water.

MEDICAL JURISPRUDENCE.

Employment of Iodine and Bromine as tests of the vegetable Alkalies.—M. Donné lately presented to the French Academy of Sciences, a memoir on this subject, which was referred to Chevreul and D'Arcet. They reported, that the anticipations of the author which extended to the certainty of these respective bodies being unequivocal and distinctive tests of vegetable alkalies, had not been sufficiently verified by experiments. They however applaud his industry, and in consideration of the novelty of the subject, recommend a continuance of his labours. We find it mentioned in the last No. of the North American Medical and Surgical Journal, that on the application of iodine and bromine in vapour to the vegetable alkalies, distinctive colours, consisting of various tints of yellow, red, and violet, are developed.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

1. *Chemical Table, exhibiting the Elementary Substances, their forms, combinations, prime equivalents, and combining quantities.* By JAMES HADLEY, M.D. Professor of Chemistry in the College of Physicians and Surgeons of the Western District.

A large sheet bearing this title has recently been published by Professor Hadley, and it will, in our opinion, be a highly useful one to the chemical student. From the following explanation attached to the table by the author, our readers will be able to form an idea of the amount of information which it contains, and of the manner in which this information is conveyed.

"The simple substances are arranged in the left hand column, beginning at the top with oxygen, and ending with yttrium. To the right hand of any individual substance in this column are the compounds formed by that substance, and those which precede it in the order of arrangement. The simple substances, and their combining quantities, are known in the compounds by the colours which represent them in the left hand column. Where the colours are not separated by a line, the combining quantities are not determined. ○ Denotes a gas: ⊙ a liquid. The figures in the upper part of a space representing a body, if it be a solid or liquid, show its specific gravity. If it be a gas, they show the weight of 100 cubic inches in grains. The figures on the lower line of a space express the prime equivalents of the simples, their combining quantities, and the representative numbers of the compounds."

The ingenuity displayed in the construction of this table, is fully equalled by the neatness and beauty of its mechanical execution.

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2. *The Transylvania Journal of Medicine and the Associate Sciences. Edited by John Esten Cooke, M.D. Professor of the Theory and Practice of Medicine; and Charles Wilkins Short, M.D. Professor of Materia Medica and Medical Botany in Transylvania University.* Nos. 1, 2, 3, for February, May, and August, 1828. Lexington, (Kentucky) 1828.

We have perused the numbers of this Journal with pleasure and profit; and we rejoice that the physicians of the south-west are uniting their efforts in the present laudable undertaking. Among the valuable papers may be particularly specified those of Professor Dudley on Injuries of the Head, and on Hydrocele—and various articles on the epidemic and endemic diseases of that part of America, by Professor Cooke and Drs. Yandell, Harrison, and Travis. Phrenology meets with a favourable reception, and the writings of its leading advocate (Professor Caldwell) are analyzed and commended.

It is to be regretted that the courtesy due to an infant Journal should have been at all overlooked. From a sheet accompanying the last number, we observe that it has not been unnoticed. A proper reproof is administered.

3. *Transactions of the Albany Institute.* No. 1. June 1828.

The following advertisement is prefixed to this publication.

"The ALBANY INSTITUTE is composed of two Societies, which for various periods of time have existed in this city—*the Society for the Promotion of Useful Arts in the State of New-York*, and *the Albany Lyceum of Natural History.* Circumstances not necessary to be explained, led to an union of effort and property between their members and other citizens, and as a necessary consequence, to an enlargement of the objects of investigation. The present title of the association was adopted, under the idea that it would comprise the pursuit, both of science and literature in their most extensive sense.

"It has been deemed advisable to commence the publication of some of the papers read before the society. The members do not flatter themselves that they will greatly add to the general stock of knowledge—they may hope however, that their efforts will tend to disseminate a taste for it."

The present number contains the following papers, viz. 1. *Table of Variations of the Magnetic Needle, copied from one furnished by the late* Gen. SCHUYLER to S. DE WITT, Surveyor General. 2. *On the Luminous Appearance of the Ocean*, by Lieut. THOMAS R. INGALLS, U. S. Army. 3. *On the Geographical Botany of the United States*, by LEWIS C. BECK, M.D. 4. *On some modifications of Electro-Magnetic Apparatus*, by JOSEPH HENRY.

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4. *Some account of the origin, objects, and present state of the Pennsylvania Hospital.* By WILLIAM G. MALIN, Clerk and Librarian of the Hospital. Philadelphia. 12mo. 1828. pp. 24. (*From the Author.*)

This pamphlet is particularly interesting from its containing an authentic account of the insane patients treated in the Pennsylvania Hospital. Out of 25,071, admitted since its opening on the 11th of February 1752, 3487 have been cases of insanity. "Of these about 240 are designated as caused by intemperance." We extract the following table from page 13.

Cases of Insanity from Feb. 11, 1752, *to April* 26, 1828.

The following Table, the result of a very careful examination of the Hospital records, exhibits the number of Insane patients of each sex, together with the proportion cured, relieved, &c.

TOTAL.	*Cured.*	*Relieved.*	*Removed by friends.*	*Eloped.*	*Died.*	*Remain.*
Males, 418	910	452	444	188	364	60
Females, 1069	344	250	224	42	162	47
3487	1254	702	668	230	526	107

"A large proportion of the deaths have been from old age or diseases having no necessary connection with insanity.

"The number of insane persons in the house is generally about one hundred and ten."

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5. *Compendium of Operative Midwifery, or manual and instrumental operations of preternatural Labours, reduced to the greatest simplicity; preceded by an investigation of the mechanism of natural Labour. From the French of Julius Hatin, M.D.* By RICHARD TUITE, M.D. former President of the Royal Physical Society of Edinburgh. New-York. 12mo. pp. 171. 1828.

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6. *The Western Journal of the Medical and Physical Sciences.* Edited by DANIEL DRAKE, M.D. late Professor of the Theory and Practice of Medicine in Transylvania University, &c. 3 Nos. for April, May, and June 1828.

The publication of this Journal is another evidence of the growing spirit and enterprise of our western professional brethren. It is conducted with much ability by an Editor who has long since established a high character for talent and erudition. We hope it may have a long and prosperous career.

INTELLIGENCE.

UNIVERSITY OF THE STATE OF NEW-YORK.

College of Physicians and Surgeons, New-York, Aug. 11th, 1828.—The twenty-second session of the College will commence on the first Monday of November next, after which the several courses of Instruction will be continued by the respective Professors, viz.

JOHN AUGUSTINE SMITH, M.D. on Anatomy and Physiology.

ALEXANDER H. STEVENS, M.D. on the Principles and Practice of Surgery.

JOSEPH M. SMITH, M.D. on the Theory and Practice of Physic and Clinical Medicine.

EDWARD DELAFIELD, M.D. on Obstetrics and the Diseases of Women and Children.

JOHN B. BECK, M.D. on Materia Medica and Medical Jurisprudence.

JOHN TORREY, M.D. on Chemistry and Botany.

At extra hours, and without additional expense to the student, lectures will be delivered on Medical Jurisprudence and Botany, by the Professors of those sciences.

In the various departments of the College, every facility is afforded for the acquisition of professional knowledge.

The Anatomical Museum, heretofore one of the most extensive in the country, has become recently still farther enlarged by the addition of private collections and new preparations; the specimens of Morbid Anatomy particularly, are daily increasing. In practical Anatomy the opportunities will be commensurate with the utmost wishes of the student.

In the Obstetrical Department cases will be furnished as heretofore to such students as may desire them, to be attended under the direction of the Professor of that branch.

The Dissecting-room will be open during the day and evening, under the direction of the Professor of Anatomy.

By permission of the Directors of the New-York Eye Infirmary, all the students of the College will be entitled, during the lectures, to gratuitous admission to that institution.

The Trustees cannot omit this opportunity of reiterating their obligations to the Regents of the University and to the Legislature, for the continued care which they have manifested for the science of medicine in general, and for the medical institutions of this state in particular. During the last year, the latter body passed the statute which will be found below. It is now published for the information of medical students, who will observe that the only legitimate medical institutions in the state, are those which are connected with the University, and that no degrees granted in this state are valid licenses to practice medicine and surgery, except those emanating from the Regents of the University.

By order of the Board of Trustees,

JOHN WATTS, Jun. M.D. *President.*

NICOLL H. DERING, M.D. *Registrar.*

SEC. 21. The degree of Doctor of Medicine conferred by any College in this state, *shall not be a license* to practice physic and surgery; *nor shall any College have or institute a Medical Faculty to teach the science of medicine in any other place than where the charter locates the College.*

University of the State of New-York.—The Regents of the University have conferred the degree of Doctor of Medicine on the following gentlemen, on the nomination of the State Medical Society.

Dr. THOMAS BRODHEAD, of Columbia county.

Dr. JOHN D. HENRY, of Monroe County.

Dr. ELEAZER GEDNEY, of Orange county.

The University of London has announced its opening for the session of 1828–9. No less than twenty-two Professors are appointed, and several vacant chairs are still to be supplied. The Professors in Medicine and its adjunct sciences are as follow:

Anatomy, Granville Sharpe Pattison, Esq.
Dissections and Demonstrations, James R. Bennet, Esq.
Physiology, Charles Bell, Esq.
Comparative Anatomy and Zoology, Robert E. Grant, M.D.
Nature and Treatment of Diseases, John Conolly, M.D.
Midwifery, David D. Davis, M.D.
Materia Medica and Pharmacy, Anthony Todd Thomson, M.D.
Chemistry, Edward Turner, M.D.
Botany, John Lindley, F.R.S.
Still vacant, Surgery, and Mineralogy, and Geology.
Dr. Watson of the Middlesex Hospital, lectures on Clinical Medicine, and Mr. Charles Bell on Clinical Surgery.

Flora of Java and the adjacent Isles. Extract of a letter to Jeremiah Van Rensselaer, M.D., dated Bruxelles, June 12, 1828.—Although the Indian Archipelago has been for ages the field of research for European naturalists, and particularly for those of Holland, whose colonies occupy so large a part of that vast district, it is not to be denied that its natural history in general, and its botany in particular, is still but imperfectly understood. This should be in a great measure attributed to those difficulties, almost insurmountable, which the pernicious influence of the climate opposes to those naturalists who have endeavoured to penetrate into the interior of Java, and to the neighbouring islands. The encouragement held out by government to scientific researches has, in a measure, been frustrated by the diseases incident to the climate.

The labours of Rheede and Rumph, under the patronage of the old East India Company, have been fully seen and appreciated in the publication of their magnificent works. More lately, Noronha of Spain, Thunberg of Sweden, De la Tour of France, and Horsefield of America, have successfully laboured in science, during their residence in Java, under protection of the Dutch government. Few scientific expeditions have been so happily conceived, or so wisely instructed, as that on which the King of Holland, some years ago, sent Messrs. Reinwardt, Kuhl, and Van Hasselt. Unhappily the sea engulfed the most rich and precious collections formed by the expedition: two of the naturalists composing it, Kuhl and Van Hasselt sunk in the midst of their labours, and Reinwardt was forced by the loss of health too soon to renounce his useful researches.

All these disasters did not deter Dr. Blume, who was chief of the medical department in the East Indies. He has devoted to the Flora of those countries all the moments which he could spare from important and multifarious occupations. By long perseverance and at great expense, he has formed an *Herbarium*, consisting of about three thousand species, mostly from Java, and he has published a list of them in India. He was not less susceptible than others to the insalubrity of the climate; and since the loss of health forced him to return to his home, he has employed himself in

classifying his specimens and in arranging his new genera and species. He has the assistance of Dr. Fischer in preparing his work for the press; and will embody the discoveries of Reinwardt, Kuhl, and Van Hasselt, which will render the work more complete. Drs. Blume and Fischer intend to make it similar, in all respects, to Humboldt et Bonpland's "Plantes Equinoxiales." I must not forget to say that it is written in Latin: its publication will form an epoch in the history of Botany.

Writ for the Medical Convention of 1830.—Whereas the Convention that was held at the city of Washington, in the month of January 1820, for forming a Pharmacopœia for our United States of America, did resolve that the President of that Convention should, on the 1st day of January 1828, issue writs of election to the several incorporated State Medical Societies in the northern, middle, southern, and western districts of the nation, requiring them to ballot for three delegates to a General Convention, to be held at Washington, on the 1st day of January 1830, for the purpose of revising the American Pharmacopœia; and whereas the several institutions as aforesaid, are by the same authority, requested to forward to the President, on or before the first day of April 1829, the names of the three persons so chosen; with sundry other provisions contained in the historical introduction to the work, to which the reader is referred.

Now therefore, I, Samuel L. Mitchill, by virtue of the power vested in me by the Convention of 1820, do hereby give notice to all the incorporated Medical Societies, Colleges of Physicians and Surgeons, Medical Schools, and Faculties of Universities and Colleges, and all other authorized Bodies, that they choose proper persons to represent them in the General Convention to be held in January 1830, for revising the Pharmacopœia.

Given under my hand, this first day of January, 1828, at the city of New-York.

SAMUEL L. MITCHILL, President.